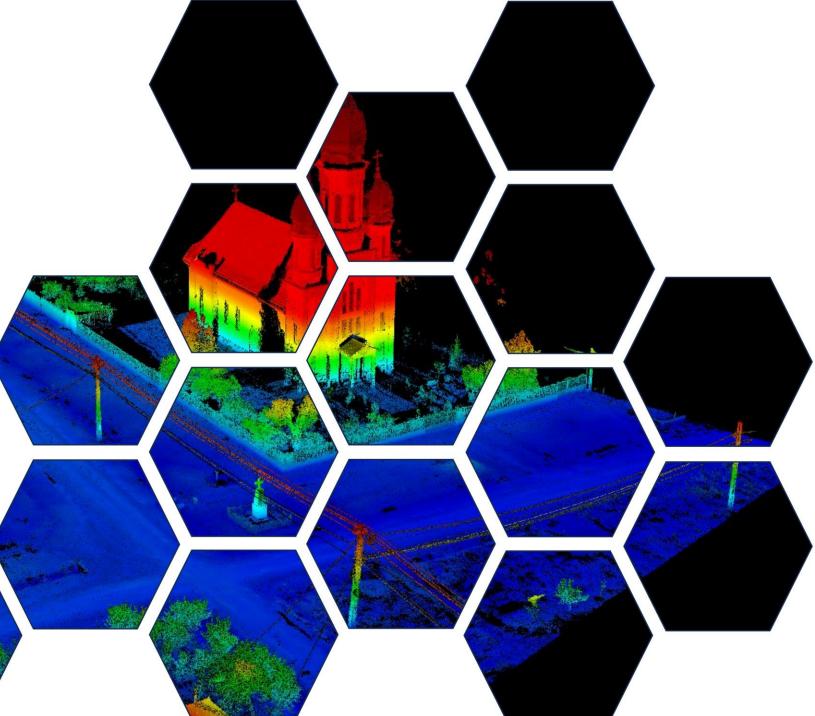


**Provision of the service** Digitalization of the low voltage electricity network and end users - Districts of Timis and

Arad.



#### Purpose of work and summary of activities

Digitalization and updating of the LV electricity distribution network in urban and sub-urban areas of the Timis and Arad districts.

For this purpose, a field survey campaign was planned and carried out, with an advanced platform Mobile Mapping System, aimed at:

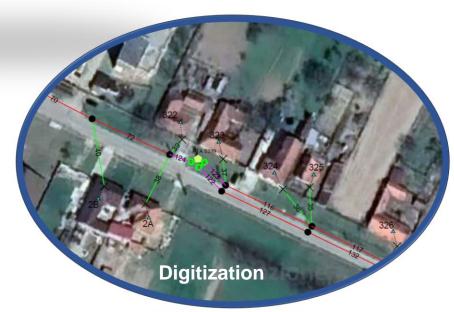
- Rebuild the network topology
- Georeference the PTs and the users connected to them
- Transfer the information acquired into the platform

customer IT

#### PHASES OF WORK

- Analysis of input data
- Field surveys
- Lidar classification
- Network and User Classification
- Civic georeferencing







## Work phases: Analysis of incoming data

**GEOCART** 

The first phase of the activities was dedicated to the analysis of incoming data. Information on areas of interest from detect have been provided in format table with the following information.

- List of users, with Customer ID, location and address

-List of the PT (Points of Transformation) with coordinates geographical

	B C	D	E	F	G			н			1	J	К
		CFT	DEN_CFT		TIPAMPASCONT - A							DEN_TIP_CO	
	-015130 T2738 COM. LIEBLING	DB1A220	LIEBLING	LIEBLING		TRADA Intravilan,					FEUEDN22210059778		
RO005E514075815 DB10-2-		DB1A239	CIACOVA rural	CEBZA	BM ext domeniul p S						FEUEDN22210047159	GIST 5/100A 3 X	TD
RO005E512011127 DB10-2-	-016819 PCZ 5232 DEPOU	DB1A136	NADRAG	NADRAG	BM int coproprieta S	TRADA SCOLII, Nr.	FN, Bl. 21,	Sc. A, Ap	. 14, Loc. NADRAG, Jud. T	IMIS 8	672760	2CM4UD :5/20A	MD
RO005E512390846 DB10-2-	-015032 T2669 COLONIE PADURENI	DB1A292	FOENI	FOENI	BM ext proprietate S	TRADA FOENI, Nr.	77, Loc. FC	DENI, Jud.	TIMIS	U	AEEEDN20810310071	GISM activ 5/60.	MD
RO005E512732385 DB10-2-	-014003 PTA2071 COMUNA BULGARUS	DB1A297	BULGARUS	BULGARUS	BM int coproprieta S	TRADA BULGARUS	, Nr. 835, L	oc. BULG	ARUS, Jud. TIMIS	U	AEEEDN20910138934	GISM activ 5/60.	MD
RO005E511930845 DB10-2-	-016682 PTA 5300 SANOVITA SAT	DB1A135	GHIZELA	SANOVITA	BM int proprietate S	TRADA SANOVITA	, Nr. 234, L	oc. SANO	VITA, Jud. TIMIS	U	AEEEDN21910316191	GISM activ 5/60.	MD
RO005E512401007 DB10-2-	-015120 T2678 MOARA JEBEL	DB1A295	JEBEL	JEBEL	NESPECIFICAT ST	TRADA JEBEL, Nr. 3	1132, Loc. J	EBEL, Jud	I. TIMIS	U	AEEEDN16310024097	GISM activ 5/60.	MD
RO005E511927313 DB10-2-	-016613 PTA 5264 HERENDESTI	DB1A140	VICTOR VLAD DELAMAI	RINA HERENDESTI	BM int coproprieta S	TRADA HERENDES	TI, Nr. 137,	LOC. HER	ENDESTI, Jud. TIMIS	U	AEEEDN20910130638	GISM activ 5/60.	MD
RO005E512438737 DB10-2-	-015128 T2706 COM. LIEBLING	DB1A220	LIEBLING	LIEBLING	BM ext proprietate S	TRADA LIEBLING, I	Nr. 60, Loc.	LIEBLING	, Jud. TIMIS	0	01000678297513	CSM201 0,25-5(8	MD
RO005E512738358 DB10-2-	-014048 PTA2053 COMUNA IGRIS	DB1A266	SANPETRU MARE	IGRIS	BM int proprietate S	TRADA IGRIS, Nr. 9	90, Loc. IGR	IS, Jud. T	IMIS	U	AEEEDN22910400606	ENEL GISM activ	MD
RO005E512429692 DB10-2-	-015130 T2738 COM. LIEBLING	DB1A220	LIEBLING	LIEBLING	BM ext proprietate S	TRADA LIEBLING, I	Nr. 530, Loc	. LIEBLIN	G, Jud. TIMIS	5	977886	1CM4UD :10/40	MD
RO005E512771243 DB10-2-	-014003 PTA2071 COMUNA BULGARUS	DB1A297	BULGARUS	BULGARUS	BM int coproprieta S	TRADA BULGARUS	Nr. 686 A.	Loc. BUL	GARUS, Jud. TIMIS		AEEEDN20910136970	GISM activ 5/60.	MD
	-016744 PTA 5313 HODOS	DB1A131	BRESTOVAT	HODOS (BRESTOVAT)					DOS (BRESTOVAT), Jud. 1		001000025164015 AEM CST0410DC TD		
	-016639 PTA 5376 HONORICI T2	DB1A140	VICTOR VLAD DELAMA		BM int proprietate S						00040995 CSM CERE : 5(40 N		
CO005E512390352 DB10-2-		DB1A296	PADURENI	PADURENI		TRADA PADURENI					AEEEDN19210057844		
	-014548 T2885 COM. IV DENTA	DB1A280	DENTA	DENTA	BM int proprietate S						AEEEDN20910121962		
	-017629 PTA 5548 SAT SIRBOVA	DB1A160	RACOVITA	SARBOVA	BM int proprietate S						01000701590616	CSM201 0,25-5(1	
	-017629 PTA 5348 SAT SIRBOVA	DB1A100 DB1A139	TOPOLOVATU MARE	TOPOLOVATU MIC					12. Loc. TOPOLOVATU M			CST0410 CDSGN	
	-015025 T2655 TOAGER COM.	DB1A139 DB1A281	GIERA	TOAGER	BM ext proprietate S						204267	5CM4UD :10/40/	
	-015025 12655 TOAGER COM.	DB1A281 DB1A134	GAVOJDIA	LUGOJEL	BM ext domeniul p S						FEUEDN22210054552		
	-016523 PTA 5202 LUGOJEL -017644 T 5570 BERINI COMUNA 2	DBIA134 DBIA161	SACOSU TURCESC	BERINI							FEUEDN22210054552 FEUEDN22210054576		
	-01/644 1 55/0 BERINI COMUNA 2 -014020 PTA 2114 COMUNA TOMNATIC	DB1A161 DB1A267	TOMNATIC	TOMNATIC	BM ext proprietate S BM int proprietate S						FEUEDN22210054576 062972	GIST 5/100A 3 X 1CM4 :5/20A	
		DB1A267	TOMNATIC	TOMNATIC	BM int proprietate S	TRADA TOMINATIO	., Nr. 153, L	.oc. TOMI	NATIC, Jud. TIMIS	1	062972	1CM4 :5/20A	ND
RO005E512350583 DB10-2	A B C	D		E	F	G	н		1	K		L	and the second second
RO005E512742397 DB10-2	T Chemit Cloi, Conice Mont . Mix Mon	<ul> <li>km traseu re</li> </ul>		odo	<ul> <li>coordonate</li> </ul>				Denominazione CFT	<ul> <li>Unità Oper</li> </ul>		ne Unità Operativ	
0005E512374714 DB10-2		1	4.9 PTA 5330 BABSA		45,808563, 21,788			DB1A130		DB1AU2	UO MTJT TIMIS	OARA EXTERNE	BABSA
0005E511983203 DB10-2			6.5 PTA 5389 BALINT S PTA 5384 BALINT S	SMA II	45,815731, 21,848		Lugoj Lugoj	DB1A128 DB1A128		DB1AU2 DB1AU2		OARA EXTERNE	BALINT
RO005E512771962 DB10-2	5 117 DB10.2.016592 016592		PTA 5326 BALINT F		45.812299. 21.857		Lugoj		BALINT	DB1AU2		OARA EXTERNE	BALINT
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(0003E312724333 DB10-2			14.1 T2691 FERMA VAC		45,391202, 21,146	215 E	Deta	DB1A278	BANLOC	DB1AU2	UO MTJT TIMIS	SOARA EXTERNE	BANLOC
C0003E512724555 DB10-2	7 1 DB10-2-014605 014605		14.1 T2691 FERMA VAC T 2731 FERMA VAC	CI PESCUS	45,391202, 21,146 45,39072, 21,1768	215 E 96 E	Deta Deta	DB1A278 DB1A278	BANLOC BANLOC	DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE	BANLOC
R0003E312724353 DB10-2	7 1 DB10-2-014605 014605 8 133 DB10-2-014608 014608		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN	CI PESCUS ILOC	45,391202, 21,146 45,39072, 21,1768 45,399913, 21,137	215 E 96 E 67 E	Deta Deta Deta	DB1A278 DB1A278 DB1A278	BANLOC BANLOC BANLOC	DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC
C003E312724555 DB10-2	7 1 DB10-2-014605 014605 8 133 DB10-2-014605 014605 9 1 DB10-2-014617 014617		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN T2940 SERVICII SP	CI PESCUS ILOC BANLOC	45,391202, 21,146 45,39072, 21,1768 45,399913, 21,137 45,334536, 21,079	215 E 96 E 67 E 024 E	Deta Deta Deta Deta	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278	BANLOC BANLOC BANLOC BANLOC	DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC BANLOC
00032312724333 0610-2	7 1 DB10-2014604 01404 8 133 DB10-2014605 014605 9 1 DB10-2014608 014608 9 1 DB10-2014617 014617 10 1 DB10-2014618 014618		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN T2940 SERVICII SP T2941 SP BANLOC	CI PESCUS ILOC BANLOC	45,391202,21,146 45,39072,21,1768 45,399913,21,137 45,334536,21,079 45,334688,21,080	215 E 96 E 67 E 024 E 55 E	Deta Deta Deta Deta Deta	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278	BANLOC BANLOC BANLOC BANLOC BANLOC	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS	COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC
ROUSES12724555 0810-2	0         10510-2014605         014605           7         10510-2014605         014605         014605           8         133         0510-2014608         014608           9         1         D510-2014617         014617           10         10510-2014618         014618         014618           11         1         D510-2016568         016569		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAA T2940 SERVICII SP T2941 SP BANLOC 4.4 PTA 5396 FADIMAC	CI PESCUS ILOC BANLOC CIAS	45,391202,21,146 45,39072,21,1768 45,399913,21,137 45,334536,21,079 45,334688,21,080 45,868874,21,849	215 E 96 E 67 E 024 E 55 E 795 E	Deta Deta Deta Deta Deta Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOT	DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC BANLOC
00032312724393 0810-2	7 1 DB10-2014604 01404 8 133 DB10-2014605 014605 9 1 DB10-2014608 014608 9 1 DB10-2014617 014617 10 1 DB10-2014618 014618		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.4 PTA 5396 FADIMAC PTA 5218 BARA FE PTA 5397 BARA IA	CI PESCUS ILOC BANLOC CIAS ERMA IAS	45,391202,21,146; 45,39072,21,1768; 45,39973,21,1779; 45,334536,21,079; 45,334688,21,080; 45,868874,21,849; 45,872144,21,883; 45,877936,21,884;	215 E 96 E 67 E 024 E 55 E 795 E 75 E 564 E	Deta Deta Deta Deta Lugoj Lugoj Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA
00032312724555 0510-2	0         1001-2-01405         01405-2           7         1001-2-014605         01405-2         01405-2           8         133         DB10-2-014605         01405-2           9         10810-2-014615         01407-2         01407-2           10         10810-2-014615         01407-2         01407-2           11         10810-2-016567         016577-016577         016577-016577           12         30810-2-016577         016577-016577         016577-016577           13         10810-2-016587         016580         016580           14         105         D810-2-016587         016588         016588		14.1 T2691 FERMA VAC T 2731 FERMA VAC T 2636 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.4 PTA 5396 FADMAC PTA 5398 BARA FA PTA 5397 BARA IA PTA 5337 BARA	CI PESCUS ILOC BANLOC CIAS IRMA IAS S POMICOLA	45,391202,21,146 45,39072,21,1768 45,399913,21,137 45,334536,21,079 45,334638,21,080 45,8768874,21,883 45,877936,21,884 45,877936,21,884 45,87443,21,880	215 E 96 E 67 E 024 E 55 E 795 E 75 E 564 E 21 E	Deta Deta Deta Deta Deta Lugoj Lugoj Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A129 DB1A129 DB1A129 DB1A129	BANLOC BANLOC BANLOC BANLOC BANLOC BANT BARA BARA BARA BARA	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA
00036312724935 081072	7         108162.2014665         114656           8         13306162.2014668         114656           9         108162.2014687         114617           10         108162.2014617         114617           11         108162.2014668         114656           12         308162.201657         11567           13         108162.201657         11578           14         105         108162.201657         11578           14         105         108162.201658         115888           15         113         108162.201655         116655		14.1172691 FERMA VAC T 2731 FERMA VAC T 2636 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.4 PTA 5396 FADIMAC PTA 5318 BARA FE PTA 5317 BARA 13 PTA 5285 BELINT T	CI PESCUS ILOC BANLOC CIAS EMA IAS S POMICOLA 3	45,391202, 21,146 45,39072, 21,1768 45,39973, 21,1778 45,334536, 21,079 45,334638, 21,080 45,668874, 21,89 45,8772144, 21,883 45,877936, 21,884 45,877936, 21,884 45,87443, 21,880	215 E 95 E 67 E 55 E 55 E 795 E 755 E 564 E 21 E 571 E	Deta Deta Deta Deta Deta Lugoj Lugoj Lugoj Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A130	BANLOC BANLOC BANLOC BANLOC BANLOC BALINT BARA BARA BARA BARA BELINT	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BARA
0005512724995 061072	7         101612-214695         514695           8         1310512-214695         514695           9         10612-204617         514617           10         10512-204618         514618           11         10612-204658         51659           12         30612-201658         51659           13         10612-201658         716597           14         105012-201658         51659           15         113         10612-201658           16         91012-2016658         516688           16         91012-2016658         516688		14.1 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN T2940 SERVICII SP T2941 SP BANLOC PTA 5396 FADIMAC PTA 5218 BARA FE PTA 5337 BARA N PTA 5337 BARA 13 PTA 5265 BELINT PTA 5287 BELINT	I PESCUS ILOC BANLOC LAS RMA IAS S POMICOLA 3 5	45, 391202, 21, 146, 45, 39072, 21, 1768, 45, 399913, 21, 137, 45, 334536, 21, 079, 45, 334638, 21, 089, 45, 86874, 21, 849, 45, 872144, 21, 883, 45, 877147, 21, 789, 45, 757197, 21, 789, 45, 757197, 21, 769, 45, 757439, 21, 774,	215 E 96 E 67 E 024 E 55 E 75 E 564 E 21 E 571 E 571 E 188 E	Deta           Deta           Deta           Deta           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130	BANLOC BANLOC BANLOC BANLOC BANLOC BALINT BARA BARA BARA BARA BELINT BELINT	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE COARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BELINT
0005512724995 061072	7         108162.2014665         114656           8         13306162.2014668         114656           9         108162.2014687         114617           10         108162.2014617         114617           11         108162.2014668         114656           12         308162.201657         11567           13         108162.201657         11578           14         105         108162.201657         11578           14         105         108162.201658         115888           15         113         108162.201655         116655		14.1172691 FERMA VAC T 2731 FERMA VAC T 2636 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.4 PTA 5396 FADIMAC PTA 5318 BARA FE PTA 5317 BARA 13 PTA 5285 BELINT T	2) PESCUS ILOC BANLOC 2) JAS ERMA IAS 5 POMICOLA 3 5 5	45,391202, 21,146 45,39072, 21,1768 45,39973, 21,1778 45,334536, 21,079 45,334638, 21,080 45,668874, 21,89 45,8772144, 21,883 45,877936, 21,884 45,877936, 21,884 45,87443, 21,880	215 E 96 E 67 E 024 E 55 E 75 E 564 E 21 E 571 E 571 E 188 E 62 E	Deta           Deta           Deta           Deta           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A130	EANLOC BANLOC BANLOC BANLOC BANLOC BALINT BARA BARA BARA BARA BARA BELINT BELINT	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMIS UO MTJT TIMIS	OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BARA
0005512724995 061072	7         10815-241466 514669           8         1301612-241668 514688           9         10816-24168 514688           9         10816-24168 514688           10         10816-24168 704688           11         10816-24168 704688           12         30816-24168 704658           13         10816-24168 704658           14         10616-241688 704588           15         1101612-241688 704588           16         10916-241686 7045687           17         1010182-241668 7045687           18         8010192-2016868 7045687           19         12018-241667 704567		14.11 T2651 FERMA VAC T 2731 FERMA VAC T2635 MOARA BAN T2635 MOARA BAN T2940 SERVICI 59 T2941 SP BANLOC 4.4 PTA 5395 FADIMAC PTA 5395 FADIMAC PTA 5397 BARA AL 31 PTA 5337 BARA 13 PTA 5365 BELINT T PTA 5287 BELINT T PTA 5288 BELINT T PTA 5288 BELINT T PTA 5288 BELINT T	2) PESCUS LOC BANLOC ZIAS FRMA IAS F POMICOLA 3 5 5 5 7 7	45.391202.21146 45.399913.21137 45.399913.21137 45.334536.21079 45.334638.21080 45.868874.21.849 45.877936.21888.21080 45.877936.21844.21.883 45.877936.21844.21883 45.875197.21789 45.756175.21782 45.756175.21782	215 E 96 E 67 E 55 E 55 E 75 E 564 E 21 E 571 E 188 E 62 E 322 E 322 E 71 E	Deta           Deta           Deta           Deta           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A128 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130	BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARA           BARA           BARA           BARA           BELINT           BELINT           BELINT           BELINT           BELINT	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMS UO MTJT TIMS	SOARA EXTERNE SOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BELINT BELINT BELINT BELINT
COUE-12/24933 OB162	7         10416-2414605         514605           8         101045-241461         514614           9         10416-241441         514614           10         10416-241461         514614           11         10416-241461         514614           12         10416-241657         516597           13         10416-241658         516588           14         10518-241648         516588           15         1110         10416-241658         516588           16         197         10518-241668         516688           16         197         10518-241668         516688           17         100         10416-2416667         716667           18         80         10412-2416677         716677           18         102         10412-2416677         716677           20         71         10318-241667         716677		14.11 T2691 FERMA VAC T 2731 FERMA VAC T2636 MOARA BAN T2936 MOARA BAN T2940 SERVICI BY PTA 5396 FADMAC PTA 5396 FADMAC PTA 5397 BANA VA PTA 5397 BANA VA PTA 5397 BANA VA PTA 5397 BANA 13) PTA 5265 BELINT PTA 5282 BELINT PTA 5282 BELINT PTA 5283 BELINT PTA 5283 BELINT PTA 5283 BELINT	2) PESCUS LLOC BANLOC BANLOC STAS S POMICOLA 3 5 5 7 7 3 400VEI	45, 391202, 211468 45, 39072, 211768 45, 390913, 211377 45, 334568, 21079 45, 334658, 21079 45, 334658, 21079 45, 68074, 21, 2183 45, 877345, 21880 45, 877345, 21880 45, 575195, 21, 752 45, 753085, 21, 759 45, 753085, 21, 75945, 21, 759 45, 753085, 21, 759 45, 753085, 21, 75945, 759 45, 753085, 21, 75945, 759 45, 753085, 21, 75945, 759 45, 7597 45, 759	215 E 56 E 57 E 55 E 55 E 564 E 571 E 571 E 188 E 562 E 572 E 573 E 574 E 574 E 574 E 574 E 575 E 577 E 575 E 577 E	Deta Deta Deta Deta Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A129 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANT BANA BANA BANA BELINT BELINT BELINT BELINT BELINT BELINT	DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2 DB1AU2	UO MTJT TIMS UO MTJT TIMS	OARA EXTERNE OARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BELINT BELINT BELINT BELINT BELINT
COULT2/24935 OB102	7         10815-241466 514680           8         1301612-241468 514688           9         10816-241481 70468           10         10816-241481 70468           11         10816-241481 70468           12         308162-04687 704687           13         10816-241682 704688           14         10619-241682 704687           15         1130616-241668 704688           14         10518-241668 704687           15         1130616-241668 704687           16         10518-241668 704687           18         800618-241668 704687           19         12018-241668 704688           19         12018-241668 704687           20         710818-241667 704677           21         22081-24167 704677           21         22081-24167 704677		14.1 72691 FERMA VAC T 2731 FERMA VAC T2555 MOARA BAN T2940 SERVICI SP T2941 SP BANLOS 4.2 PTA 5356 FADMAC PTA 5216 BAAR AF PTA 5327 BAAR IA: PTA 5326 SELINT T PTA 5285 SELINT T PTA 5285 SELINT T PTA 5285 SELINT PTA 5450 SELINT PTA 5416 SELINT PTA 5416 SELINT PTA 5416 SELINT	2) PESCUS LOC BANLOC 2045 2045 2045 2045 2045 2045 2045 2045	45.391202.21146 45.399913.21137 45.399913.21137 45.334536.21079 45.334638.21080 45.868874.21.849 45.877936.21884.21880 45.877935.21844.21883 45.877935.21844.21883 45.8779137.21789 45.757197.21789 45.756175.21752 45.75615.21752 45.75959.21758	216 E 96 E 97	Deta           Deta           Deta           Deta           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A128 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130	BANLOC           BANN           BELINT           BELINT           BELINT	DB1AU2 DB1AU2	UO MTJT TIMS UO MTJT TIMS	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BELINT BELINT BELINT BELINT BELINT BELINT
00023222933 08102	7         1046.2.414605         514605           8         101045.2.414605         514606           9         101045.2.41441         514611           10         1018-2.41441         514614           11         101842.2.41451         514614           12         10018-2.41451         514614           13         1018-2.41657         516597           14         10518-2.41658         516588           15         10102.41658         516588           16         10102.416685         516688           16         10102.416686         516688           16         00102.416686         516688           17         1010.1014.2.416667         716687           18         80.01842.2.416687         106687           19         121.2.2.10677         10677           20         21.2.2.41673         10673           21         2018-2.416673         10673           22         21.2.2.10673         10673		14.1 72691 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC PTA 5218 BAAA FE PTA 5315 FAMAA PTA 5315 FAMAA PTA 5335 FAMAA PTA 5335 FAMAA PTA 5335 FAMAA PTA 5320 FELINIT PTA 5320 FELINIT PTA 5320 FELINIT PTA 5328 FELINIT PTA 5328 FELINIT PTA 5328 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT	2) PESCUS LOC BANLOC 7 AS REMALAS 5 POMICOLA 3 5 5 7 7 8AROVEI 1 CCAS	45, 391202, 211468 45, 39072, 211768 45, 399913, 211377 45, 33458, 21079 45, 33468, 21079 45, 334688, 21089 45, 660744, 21849 45, 677346, 21840 45, 677346, 21840 45, 57197, 21, 789 45, 75439, 21, 774 45, 75463, 21, 772 45, 750195, 21, 752 45, 750195, 21, 552 45, 750195, 21, 55015, 21,	215 E 66 E 67 E 67 E 67 E 65 E 75 E 77 E	Deta Deta Deta Deta Deta Lugoj Buzias	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A128 DB1A128 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A137	BARLOC           BARA           BARA           BARA           BELINT	DB1AU2 DB1AU2	UO MTJT TIMB UO MTJT TIMB	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BELINT BELINT BELINT BELINT BELINT BELINT BELINT BELINT
	7         10815-241466 514669           8         130815-241466 514669           9         10815-241461 514619           9         10815-241461 514619           10         10815-241461 514619           11         10815-241461 514619           12         30815-241657 516577           13         10815-241665 516668           14         10518-241665 516668           15         1130815-241665 516666           16         91815-241665 516666           17         020815-241667 516670           18         201815-241667 516670           19         201815-241667 516670           12         201812-241667 516670           13         201812-241667 516670           20         20182-241667 516670           21         20182-241667 516670           22         108192-241676 516760           23         90182-241676 516760		14.1 72691 FERMA VAC T 2731 FERMA VAC T2555 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.2 PTA 5395 FADMAC PTA 5218 BAAR AE PTA 5395 FADMAC PTA 5285 BELINT PTA 5285 BELINT PTA 5285 BELINT PTA 5426 BELINT PTA 545 BELINT PTA 545 BELINT PTA 545 BELINT PTA 545 BELINT PTA 545 BELINT	D PESCUS I.GC BANLOC CAS RAS REMA IAS POMICOLA 3 5 7 7 7 7 7 7 7 7 7 7 7 7 7	45.391202, 21146 45.39072, 211766 45.399913, 211376 45.33468, 21009 45.534688, 21009 45.56874, 21849 45.672144, 21849 45.672144, 21849 45.672144, 21849 45.772145, 21844 45.782152, 21720 45.752439, 21774 45.74655, 21759 45.753356, 21559 45.753356, 21559	215 E 96 E 97 E 97 E 96 E 97 E	Deta           Deta           Deta           Deta           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A1310 DB1A1310	BAALOC           BAALOC           BAALOC           BAALOC           BAALOC           BAALOC           BAALOC           BAALNT           BARA           BARA           BARA           BARA           BARA           BELINT	DB1AU2 DB1AU2	UO MIT TT MIN UO MIT TIME UO MIT TIME	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BELINT BELINT BELINT BELINT BELINT BELINT
	7         1046.2.414605         514605           8         101045.2.414605         514606           9         101045.2.41441         514611           10         1018-2.41441         514614           11         101842.2.41451         514614           12         10018-2.41451         514614           13         1018-2.41657         516597           14         10518-2.41658         516588           15         10102.41658         516588           16         10102.416685         516688           16         10102.416686         516688           16         00102.416686         516688           17         1010.1014.2.416667         716687           18         80.01842.2.416687         106687           19         121.2.2.10677         10677           20         21.2.2.41673         10673           21         2018-2.416673         10673           22         21.2.2.10673         10673		14.1 72691 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC PTA 5218 BAAA FE PTA 5315 FAMAA PTA 5315 FAMAA PTA 5335 FAMAA PTA 5335 FAMAA PTA 5335 FAMAA PTA 5320 FELINIT PTA 5320 FELINIT PTA 5320 FELINIT PTA 5328 FELINIT PTA 5328 FELINIT PTA 5328 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT PTA 5324 FELINIT	2) FESCUS LOC BANLOC 7 AS REMA LAS S FOMICOLA 3 5 5 5 7 7 AAROVEI 1 1 CAS MA II 8 RR	45, 391202, 211468 45, 39072, 211768 45, 399913, 211377 45, 33458, 21079 45, 33468, 21079 45, 334688, 21089 45, 660744, 21849 45, 677346, 21840 45, 677346, 21840 45, 57197, 21, 789 45, 75439, 21, 774 45, 75463, 21, 772 45, 750195, 21, 752 45, 750195, 21, 552 45, 750195, 21, 55015, 21,	215 E 6 E 67 E 67 E 67 E 65 E 75 E 75 E 75 E 75 E 71 E	Deta           Deta           Deta           Deta           Lugoj	DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A128 DB1A128 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A137	BARLOC           BARA           BARA           BARA           BARA           BARA           BELINT	DB1AU2 DB1AU2	UO MUT TINKS UN MU	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BANA BARA BARA BARA BARA BARA BARA BARA
000532224935 08102	7         1046.2.41460.5 %1460.5           8         130043.2.41460.5 %1460.5           9         1043.2.41461.7 %14617           10         1043.2.41461.7 %14617           10         1043.2.41461.7 %14617           11         1043.2.41461.7 %14617           12         1043.2.41467.7 %15617           13         1043.2.41657.8 %15638           14         105194.2.41658.7 %15657           15         10104.2.41658.7 %15657           14         105194.2.41658.7 %15657           15         10104.2.41668.7 %15668           15         09104.2.41668.7 %15667           16         09104.2.41668.7 %15667           18         800142.2.41668.7 %15667           20         2014.2.41667.7 %15671           21         2018-2.41667.7 %15671           22         2014.2.41667.7 %15671           23         9014.2.41667.7 %15671           24         2014.2.4167.7 %15671           25         9014.2.41667.7 %15671           24         9014.2.4167.7 %15671           25         9014.2.4167.7 %15671           26         1041.2.4163.3 %1433		14.1 72691 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2640 SERVICI SP T2541 SP BANLOS 4.4 PTA 5356 FADMAC PTA 5216 BAAA RE PTA 5317 BAAA 13 PTA 5265 FADMAC PTA 5325 BELINT T PTA 5263 FELINT T PTA 5326 FELINT T PTA 5326 FELINT T PTA 5326 FELINT C PTA 5326 FELINT C	2) FESCUS LOC BANLOC 7 AS REMA IAS S FOMICOLA 3 5 5 5 5 7 7 ARAOVE 1 1 4 5 5 7 7 ARAOVE 1 1 4 5 5 5 7 7 8 4 8 7 7 8 4 8 7 7 8 4 8 7 8 7 8 7	45,391722,21148,45,391722,21148,45,39172,21148,45,39172,211789,45,31458,21079,45,31458,21079,45,31458,21079,45,31458,21079,47,149,45,31458,21079,47,149,45,3145,3144,2148,3144,2144,2144,2176,4146,2176,4144,2176,4146,2176,4144,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4146,2176,4144,2176,4146,2176,4146,2176,4146,2176,4144,2176,4146,2176,4144,2176,4144,2176,4144,2176,4144,2176,4144,2176,4146,2	215 E 50 E 51 E 52 E 55 E 56 E 56 E 56 E 57 E	Deta Deta Deta Deta Deta Ugoj Lugoj Deta Jimbolia	DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A1276 DB1A128 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A275 DB1A24275	BARLOC           BARA           BARA           BARA           BARA           BARA           BARA           BARA           BARA           BELINT	DB1AU2 DB1AU2	UO MUTT TIME UO AUM TT TIME UO MUTT TIME	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANA BARA BARA BARA BARA BARA BARA BARA
00053222993 08102	7         10815.241466 514669           8         100162.241460 514669           9         10815.241461 514619           9         10815.241461 514619           10         10815.241461 514619           11         10815.241461 514619           12         30815.241657 516577           13         10815.241658 516588           14         1050812.241658 516588           15         1110812.241665 516668           16         913812.241665 516686           17         1010812.241667 516667           18         801912.241668 516688           20         10812.241667 51667           21         2012.24167 51667 16667           22         10812.241667 51667 16667           23         10812.24167 51667 16667           24         10812.24167 51657 51657           25         97.0142.24153 51433 51433           26         10812.241675 51657 51657           27         10812.24167 51641 31634		14.1 72691 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2941 SP EAMLOC 4.5 PTA 5216 FADMACA PTA 5216 FADMACA PTA 5216 FADMACA PTA 5216 FADMACA PTA 5226 FELINT PTA 5262 FELINT PTA 5282 FELINT PTA 5282 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5380 FELINT PTA 5390 FELINT PTA 5390 FELINT PTA 5390 FELINT	2) PESCUS LCC BANLOC 2) AS 5 RS 7 RMA LAS 5 POMICOLA 3 5 5 5 5 5 5 7 7 7 7 7 7 7 8 8 8 7 8 8 7 8 7	45,391722,21148 45,39072,211789 45,39073,211789 45,33468,21079 45,33468,21079 45,33468,21079 45,33468,2108 45,76178,218 45,76178,218 45,76178,218 45,76197,2178 45,7618,2178 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,75088,21799 45,77012,2109 45,77012,2109 45,7502,2109 45,7502,2102,2109 45,7502,2109 45,7502,2109 45,7502,2109	215 E 57 E 57 E 58 E 55 E 55 E 564 E 57 I 564 E 57 I 575 E 564 E 575 I 577 I 57	Deta Deta Deta Deta Deta Deta Lugoj Lugo Lugo Lugo Lugo Lugo Lugo Lugo Lugo	DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A1276 DB1A1275 DB1A128 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A275 DB1A242 DB1A242 DB1A242	BARLOC         BARLOC           BARL         BARLOC           BARLOC         BARLOC           BARLOC         BARLOC           BARLOC         BARLOC           BARLOC         BARLOC           BARLOC         BARLOC           BELINT         BELINT           BELINT         BELINT           BELINT         BELINT           BELINT         BELINT           BELINT         BELINT           BELINT         BELINT           BERCON         BERCON           BERCON         BERCON	081AU2 081AU2	Went TTIN NO WAT TTIN TO WAT THE OUT WAT TIN THE WAT THE WAT THE WAT TIN THE WAT THE WAT THE WAT TIN THE WAT T	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BELINT BELINT BELINT BELINT LUGOJEL BELINT BELINT BELINT BELINT BELINT BELINT BELINT BELINT
	7         1046.2.41460.5 %1466.5           8         131048.2.41460.5 %1468.6           9         1048.2.41461.7 %14617           10         1048.2.41461.7 %14617           11         1048.2.41461.7 %14617           12         1048.2.41461.7 %14617           13         1048.2.4165.7 %15677           14         105.048.2.4165.8 %15688           15         1010.2.4166.8 %15686           16         0910.2.4166.8 %15686           17         1010.018.2.41665.7 %15677           18         80.019.2.41668.6 %15686           19         212.019.2.4166.7 %15677           22         20.019.2.4166.7 %15667           23         90.019.2.4166.6 %15686           24         20.019.2.4166.7 %15677           25         97.019.2.42667.7 %15677           26         10.019.2.4166.7 %15677           27         10.019.2.4163.7 %15671           28         90.019.2.4163.7 %15671           29         29.029.2.4163.7 %15671           20         10.019.2.4163.7 %15671           21         10.019.2.4163.7 %15671           22         10.019.2.4163.7 %15671           23         10.019.2.4163.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143		14.1 72931 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2841 SP BANLOS 4.4 PTA 5395 FADMAC PTA 5218 BAAR AF PTA 5395 FADMAC PTA 5205 SELMT T PTA 5305 SELMT C	D FESCUS LGC BANLOC 248 248 250 250 250 250 250 250 250 250 250 250	45,391202,211,48 45,39072,21,1768 45,39073,21,1768 45,33458,21079 45,33458,21079 45,33458,21079 45,35458,21079 45,35458,21079 45,37549,2174,21,89 45,77549,21,779 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,752 45,750194,21,755 45,770194,	215         E           96         E           67         E           67         E           68         E           795         E           654         E           71         E           62         E           63         E           71         E           64         E           71         E           71         E           72         E           71         E           72         E           731         E           748         E           775         E           794         E           80         E           80         E	Deta Deta Deta Deta Deta Deta Lugoj Dugoj Lugoj Dugoj Dugo Dugo Dugo Dugo Dugo Dugo Dugo Dugo	DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A276 DB1A128 DB1A128 DB1A128 DB1A128 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A242 DB1A242 DB1A242 DB1A242 DB1A242	BARLOC           BARA           BARA           BARA           BARA           BARA           BARA           BARA           BELINT           BERGA           BERGAL           BERGAL           BERGAL	DB1AU2 DB1AU2	DAM TGT TIME AUT TAME OF A DAM TGT TAME OF A DAM TGT TAME	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANA BANA BANA BANA BANA BANA BANA BAN
	7         10815.241466 514669           8         100195.241465 514669           9         10815.241465 514669           9         10815.241461 514619           10         10815.241461 514619           11         10815.241461 514619           12         30815.24165 51469           13         10815.24165 51658           14         105192.241658 516588           15         110.0815.241665 516586           16         91.912.241665 516586           17         100.19812.241665 7016667 1           18         80.919.241668 516588           20         019.2.241667 101667 1           21         20.912.241667 101667 1           22         0.912.241667 101667 1           23         0.912.241667 101667 1           24         0.912.241667 101667 1           25         97.012.241637 51657 1           26         10.912.241667 501657 1           21         20.912.241637 51657 1           22         10.912.241637 51657 1           23         0.912.241637 501657 1           24         0.912.241637 501657 1           25         97.012.24153 51433 1           26         1.904.241313 511313 1           27		14.1 72691 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2541 SP EAMLOC 4.5 PTA 5216 FADMAC PTA 5216 FADMAC PTA 5216 FADMAC PTA 5216 FADMAC 13 PTA 5256 FELINT PTA 5262 FELINT PTA 5262 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5280 FELINT PTA 5380 FELINT PTA 5390 FELINT PTA 5300 FELINT	2) FESCUS LCC BANLOC 2) AS 5 AS 5 FOMICOLA 3 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	45,391202,211,48 45,39072,211,780 45,39073,21,7780 45,33458,21079 45,33458,21079 45,33458,21079 45,33458,21074 45,7442,2183 45,76142,2183 45,76142,2183 45,76142,2183 45,76142,2183 45,76143,2175,21782 45,750143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770143,2175,21782 45,770142,2175,21782 45,770142,2175,21782 45,77012,2175,21782 45,7702,2175,21775 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,21782 45,7702,2175,2175 45,7702,2175,21782 45,7702,2175 45,7702,2175 45,7702,2175 45,7702	215 E 596 E 577 E 585 E 585 E 585 E 584 E 587 E 584 E 58	Deta Deta Deta Deta Deta Lugoi Jugoi Jugoi Jugoi Jimbolia Jimbolia	DB1A276 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A1420 DB1A242 DB1A242 DB1A242 DB1A242	BARLOC           BARLY           BARLOC           BARLY           BARLOC           BARLY           BARA           BARA           BARA           BARA           BARA           BELINT           BELINT	DB1AU2 DB	DAM TGT TIME JOA MTGT TIME UO MTGT TIME	IOARA EXTERNE IOARA EXTERNE IO	BARLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BARA BARA BAR
000532224935 08102	7         1046.2.41460.5 %1466.5           8         131048.2.41460.5 %1468.6           9         1048.2.41461.7 %14617           10         1048.2.41461.7 %14617           11         1048.2.41461.7 %14617           12         1048.2.41461.7 %14617           13         1048.2.4165.7 %15677           14         105.048.2.4165.8 %15688           15         1010.2.4166.8 %15686           16         0910.2.4166.8 %15686           17         1010.018.2.41665.7 %15677           18         80.019.2.41668.6 %15686           19         212.019.2.4166.7 %15677           22         20.019.2.4166.7 %15667           23         90.019.2.4166.6 %15686           24         20.019.2.4166.7 %15677           25         97.019.2.42667.7 %15677           26         10.019.2.4166.7 %15677           27         10.019.2.4163.7 %15671           28         90.019.2.4163.7 %15671           29         29.029.2.4163.7 %15671           20         10.019.2.4163.7 %15671           21         10.019.2.4163.7 %15671           22         10.019.2.4163.7 %15671           23         10.019.2.4163.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143.3 %143		14.1 72991 FERMA VAC T 2731 FERMA VAC T2535 MOARA BAN T2940 SERVICI SP T2941 SP BANLOC 4.4 PTA 5395 FADMAC PTA 5218 BAAR AF PTA 5395 FADMAC PTA 5205 SELMT T PTA 5305 SELMT C	D FESCUS I.GC BANLOC JAS RAMA LAS S FOMOLA S S To To To To To To To To To To	45,391202,211,48 45,39072,21,1768 45,39073,21,1768 45,33458,21079 45,33458,21079 45,33458,21079 45,35458,21079 45,35458,21079 45,37549,2174,21,89 45,77549,21,779 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,772 45,75649,21,752 45,750194,21,755 45,770194,	215         E           67         E           67         E           55         E           55         E           56         E           57         E           58         E           59         E           50         E           51         E           52         E           53         E           54         E           57         E           58         E           59         E           50         E <tr td=""></tr>	Deta Deta Deta Deta Deta Deta Lugoj Dugoj Lugoj Dugoj Dugo Dugo Dugo Dugo Dugo Dugo Dugo Dugo	DB1A276 DB1A278 DB1A278 DB1A278 DB1A278 DB1A278 DB1A128 DB1A129 DB1A129 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A1420 DB1A242 DB1A242 DB1A242 DB1A242	BARLOC           BARA           BARA           BARA           BARA           BARA           BARA           BELINT           BELINT           BELINT           BELINT           BELINT           BERGESAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU	DB1AU2 DB1AU2	UO MUTT TIME UO MU	NOARA EXTERNE NOARA EXTERNE	BANLOC BANLOC BANLOC BANLOC BANLOC BANLOC BANA BANA BANA BANA BANA BANA BANA BAN
	7         10815-241466 514689           8         1301612-241468 514689           9         10816-24148 514689           9         10816-24148 514689           11         10816-24148 514618           12         30816-24168 514689           13         10816-24168 51688           14         10619-24168 5176857           13         10816-241688 516888           14         10519-241688 516888           15         1101812-241686 516888           19         1010182-241686 516888           19         1010182-241686 516888           19         1010182-241686 516886           10         10812-241687 51687           20         10812-241687 51687           21         20812-241678 51673           22         10812-241687 51687           23         50812-241637 51657           24         30812-241637 51657           25         9012-2241675 51657           26         9012-2241675 51657           25         9012-2241675 51657           26         9012-2241675 51657           26         9012-2241675 51657           26         9012-2241675 51657           26         9012-2241675 51657      <		14.1 72931 FERMA VAC T 2731 FERMA VAC T 2735 MOARA BAN T 2940 SERVICI SP T 2941 SP BANLOC 4.4 PTA 5395 FADMAC PTA 5218 BAAR AL PTA 5395 FADMAC PTA 5235 BEANT PTA 5235 BEANT PTA 5235 BEANT PTA 5235 BEANT PTA 5235 BEANT PTA 5235 BEANT PTA 5355 BEANT PTA 5357 COM PTA PTA 5357 COM PTA PTA 5450 COM PTA PTA 5	2) PESCUS LCC BANLOC 2) AS 5 7 AS 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	45,391202,211,48 45,39072,21,1768 45,39073,21,1768 45,33458,21,079 45,33458,21,079 45,33458,21,079 45,33458,21,000 45,56974,21,84 45,87795,21,84 45,87795,21,84 45,787197,21,709 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,756175,21,72 45,75617,21,72 45,75617,21,72 45,75617,21,72 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,75517,20,592 45,55552,21,427 45,555552,21,427 45,555552,21,427 45,555552,21,427 45,55555555555555555555555555555555555	215         E           67         E           67         E           55         E           56         E           57         E           58         E           59         E           50         E           51         E           57         E           580         E           590         E           591         E           592         E           592         E	Deta Deta Deta Deta Deta Lugo Lugo Lugo Lugo Lugo Lugo Lugo Lugo	DB1A276 DB1A2776 DB1A2776 DB1A2776 DB1A2776 DB1A2776 DB1A1276 DB1A128 DB1A128 DB1A129 DB1A129 DB1A130 DB1A130 DB1A130 DB1A130 DB1A130 DB1A1310 DB1A130 DB1A130 DB1A242 DB1A242 DB1A242 DB1A242 DB1A242	BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARLOC           BARA           BARA           BARA           BARA           BARA           BARA           BARA           BELINT           BELINT           BELINT           BELINT           BELINT           BERGESAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU           BEREGSAU           CENE           SACOSU TURCESC	DB1AU2 DB	UO MIT TI MIN UO MIT TO MIN TO MIN TO MIN TO MIN UO MIT TI MIN UO MIN TI MIN UO MIT TI MIN UO MIN UN MIN TI MIN UO MIN UN MIN TI MIN UO MIN UN MIN UU	NOARA EXTERNE NOARA EXTERNE	BARLOC BANLOC BANLOC BANLOC BANLOC BANLOC BARA BARA BARA BARA BARA BARA BARA BAR
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### Work phases: Analysis of incoming data



The input data proved insufficient for the correct planning of the surveys, due to incompleteness or ambiguity of the data.

A long phase of correction and adaptation of the information, with the precious support of the Client and of databases and public road maps found online, led to the definition of the routes to be surveyed.

The survey campaigns were planned for complete coverage of the urban and sub-urban areas of the locations of interest.

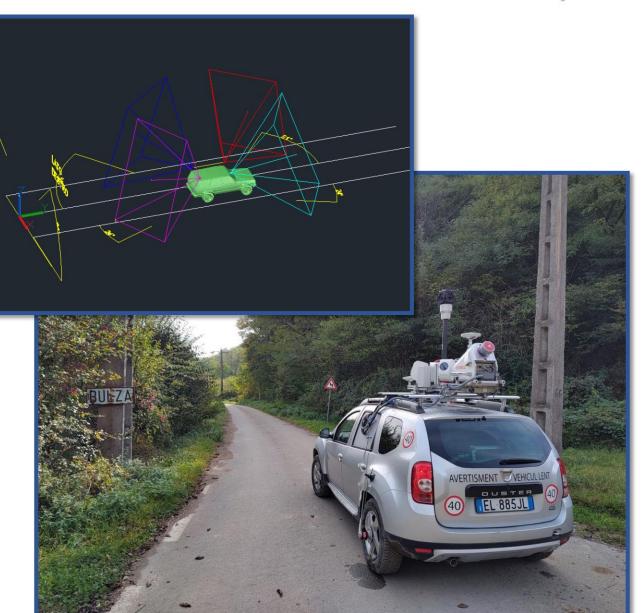


# Work phases: Field surveys

The surveys were carried out with the MMS (Mobile Mapping System) platform, installed on a 4x4 vehicle also suitable for rural routes.

The platform was specifically customized for the survey specifications and composed of the main components of:

- Appalnix navigation system
- Riegl Laser Scanner
- Flir Ladybug 360° panoramic camera
- -Set of 4 high definition rectangular cameras





## Work phases: Unclassified point cloud acquisition



The navigation system, consisting of GNSS receiver, IMU inertial system and Odometer allowed to georeference all the data detected with very high precision:

- Fullwaveform laser point clouds with a minimum density of 300 pt/m2
- 32 Mpixel 360° panoramic photos with shutter intervals every 5 m
- Set of 4 rectangular images of 50 Mpixel and shooting rate of 3 photos/sec



## Work phases: Point cloud classification



The laser point clouds have been carefully classified to define the geographic context and topology of the net:

The elements of the territory have been classified:

- Land

-Roads

-Buildings

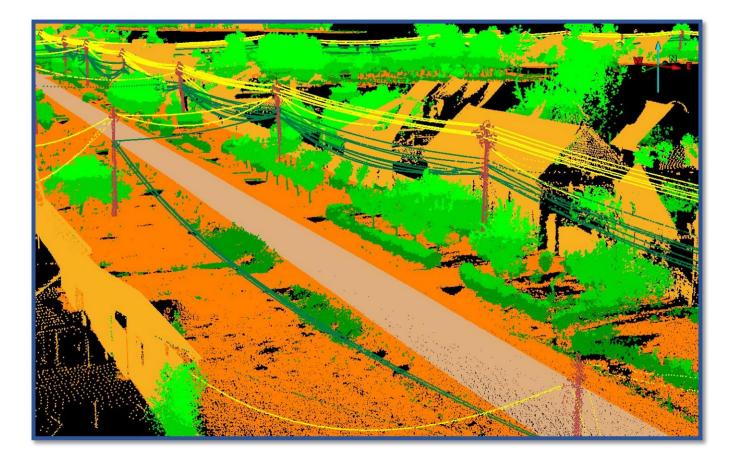
-Vegetation

And the network elements:

- Supports

-Conductors and connections

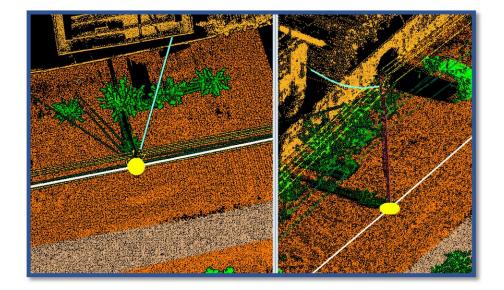
- Other cables (MV, TLC, other)





The positions of the supports and the backbone and branch network layouts were extracted from the laser point clouds.

Subsequently, the connections were extracted and, with the support of high resolution images, the type of cable was identified: bare or insulated and the class to which it belongs.







The panoramic images, rectified and displayed in a special software application in sync with the laser point clouds, were used for the general overview of the network and for the rapid identification of the users.



360° panoramic photo



photo oriented and rectified by the viewing software.

### Work phases: Classification of the electricity network and utilities

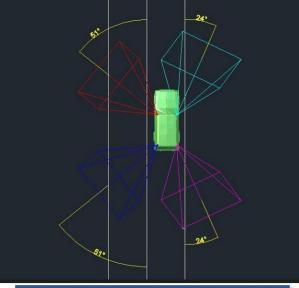


The high resolution rectangular images, acquired by 4 synchronized cameras, installed in position:

Front-Right, Front-Left, Rear-Right, Rear-Left,

allowed us to detect in detail:

- connections,
- type of cable,
- house numbers.





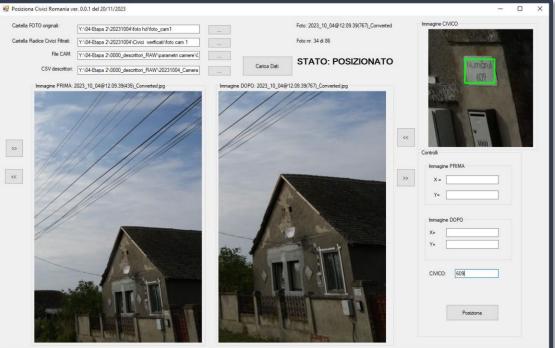


### Work phases: Civic georeferencing



To identify and georeference house numbers, an Artificial Intelligence algorithm was developed which allowed the numbers to be identified and subsequently georeferenced thanks to the navigation data acquired during the survey





### Work phases: Civic georeferencing



The production of the final documents was carried out by standardizing and verifying the data contained in the DB

Customer with those acquired in the field.



Civic Surveyed Civic associate

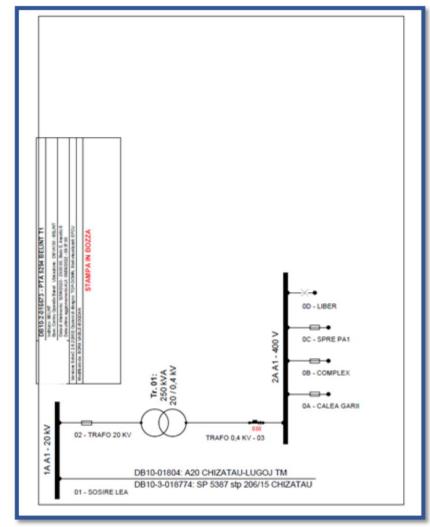
#### Associated Civic:

Building connected to an active user (present on Eneltel) without house number.

GEOCART sensing innovation

For each location detected, the information obtained was divided by PT circuit and by no. of active backbones.





## **Products:**

The final products, following strict quality controls, were exported in the formats required by the Customer's graphics platform.

The data was produced in tabular format and printouts with the network diagrams and registered users, divided by location and circuit.

	AUXILIAR.xls	
	副 BMP.xls 副 DERIV_CT.xls	X
	INC_LINI.xls	
	Eg_Noduri.xls	ICLOBA
	Eg_NrStr.xls	
	NR_STR.xls	
	Ramuri.txt	
	Ramuri_Noduri.xls	
	T 2539_1.pdf	
	🔁 T 2539_2.pdf	
	100	67
O DINT_Y	₽ 70	
466199.68 466237.12	23	
466237.12 466266.03 466266.03	38	58 8 53
466297.33 466297.33 466326.49	32	
466326.49	96	
466354.80		85
466380.25	53	80 80
466404.18	36	
466430.53 466430.53		
466455.51	11	A CONTRACT OF A
466455.51 466478.80	15	
466478.80		
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466515.46		A STATE AND A STAT
466545.51	11	

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CART

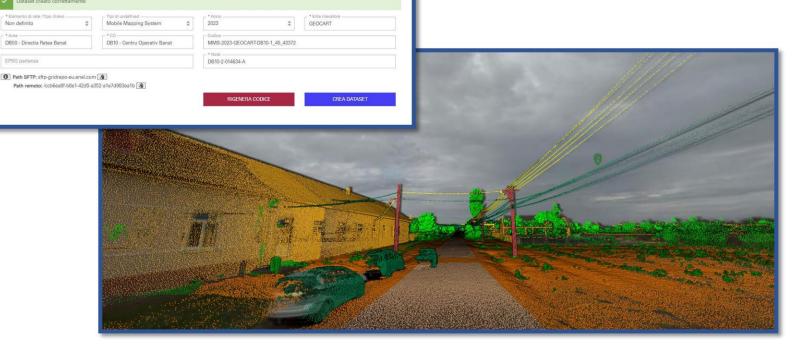
1	A	В	C	D	E	F	G	н	1	J	К	L	M	N	0	P
1	Join_Count	MATERIAL	CIR	COD_MATER	POZARE	ID	LUNGIME	DENUMIRE	STARE_CONE	COD_SOCIET	COD_ZONA	NR_NOD	SERIE_NOD	POINT_X	POINT_Y	
2	1	C83 // 3x70+54_4	4	0 8	3 C	0	45	Stalp	C-inchis	DB10	1A	250139	6	218394.276	466199.686	
3	1	C83 // 3x70+54_4	4	0 8	3 C	0	45	Stalp	C-inchis	DB10	1A	250138	6	218369.399	466237.123	
4	1	C83 // 3x70+54_4	4	0 8	3 C	1	. 35	Stalp	C-inchis	DB10	1A	250138	6	218369.399	466237.123	
5	1	C83 // 3x70+54_4	4	0 8	3 C	1	35	Stalp	C-inchis	DB10	1A	250137	6	218349.808	466266.038	
б	1	C83 // 3x70+54_A	4	0 8	3 C	2	38	Stalp	C-inchis	DB10	1A	250137	6	218349.808	466266.038	
7	1	C83 // 3x70+54_A	4	0 8	BC	2	38	Stalp	C-inchis	DB10	1A	250136	6	218329.087	466297.332	
8	1	C83 // 3x70+54_4	4	0 8	3 C	3	35	Stalp	C-inchis	DB10	1A	250136	6	218329.087	466297.332	
9	1	C83 // 3x70+54_A	4	0 8	3 C	3	35	Stalp	C-inchis	DB10	1A	250135	6	218309.715	466326.496	
0	1	C83 // 3x70+54_4	4	0 8	3 C	4	31	Stalp	C-inchis	DB10	1A	250135	6	218309.715	466326.496	
1	1	C83 // 3x70+54_4	4	0 8	B C	4	31	Stalp	C-inchis	DB10	1A	250215	6	218292.917	466352.375	
2	1	C83 // 3x70+54_4	4	0 8	B C	5	43	Stalp	C-inchis	DB10	1A	250134	6	218290.891	466354.805	
3	1	C83 // 3x70+54 A	4	0 8	3 C	5	43	Stalp	C-inchis	DB10	1A	250188	6	218325.031	466380.253	
4	1	C83 // 3x70+54_4	4	0 8	3 C	6	40	Stalp	C-inchis	DB10	1A	250188	6	218325.031	466380.253	
5	1	C83 // 3x70+54_A	4	0 8	3 C	6	40	Stalp	C-inchis	DB10	1A	250189	6	218356.715	466404.186	
6	1	C83 // 3x70+54_4	4	0 8	3 C	7	44	Stalp	C-inchis	DB10	1A	250189	6	218356.715	466404.186	
7	1	C83 // 3x70+54_4	4	0 8	3 C	7	44	Stalp	C-inchis	DB10	1A	250190	6	218391.887	466430.533	
8	1	C83 // 3x70+54_A	4	0 8	3 C	8	41	Stalp	C-inchis	DB10	1A	250190	6	218391.887	466430.533	
9	1	C83 // 3x70+54_A	4	0 8	3 C	8	41	Stalp	C-inchis	DB10	1A	250191	6	218424.698	466455.511	
0	1	C83 // 3x70+54_A	4	0 8	3 C	9	39	Stalp	C-inchis	DB10	1A	250191	6	218424.698	466455.511	
1	1	C83 // 3x70+54_A	4	0 8	зс	9	39	Stalp	C-inchis	DB10	1A	250192	6	218455.761	466478.805	
2	1	C83 // 3x70+54_A	4	0 8	3 C	10	32	Stalp	C-inchis	DB10	1A	250192	6	218455.761	466478.805	
3	1	C83 // 3x70+54_A	4	0 8	зс	10	32	Stalp	C-inchis	DB10	1A	250193	6	218481.751	466498.006	
4	1	C83 // 3x70+54_A	4	0 8	вс	11	29	Stalp	C-inchis	DB10	1A	250193	6	218481.751	466498.006	
5	1	C83 // 3x70+54_A	4	0 8	зс	11	29	Stalp	C-inchis	DB10	1A	250194	6	218504.462	466515.469	
6	1	C83 // 3x70+54_4	4	0 8	зс	12	37	Stalp	C-inchis	DB10	1A	250221	6	218512.028	466524.508	
7	1	C83 // 3x70+54_A	4	0 8	3 C	12	37	Stalp	C-inchis	DB10	1A	250177	6	218542.564	466545.511	
28	1	C83 // 3x70+54 A		0 8	3 C	13	37	Stalp	C-inchis	DB10	1A	250177	6	218542.564	466545.511	

# **Products: Repository**

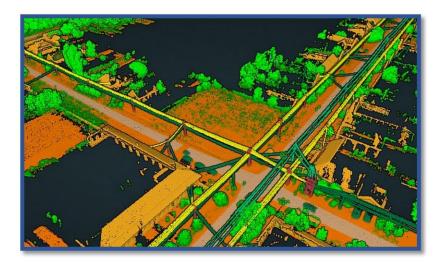
The data acquired from the survey:

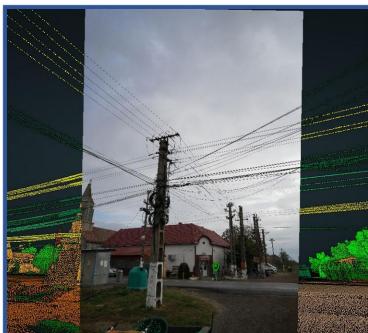
- Classified laser point clouds
- Panoramic images
- Rectangular images

have been synchronized and calibrated and uploaded to the Client's Repository platform (it is also possible to create it, if not available)







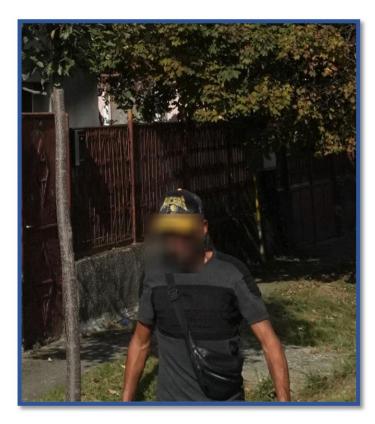


# **Products: Repository**



In accordance with the GDPR (General Data Protection Regulation), all data uploaded to the Repository was anonymized by an Artificial Intelligence algorithm that obfuscated:

- People's faces
- -Vehicle license plates







The activities made it possible to detect, survey and produce the following volumes overall:

BT network detected	1736.4 km
Number of Transformation Points detected	314
Number of Circuits mapped	841
Number of users registered	40276