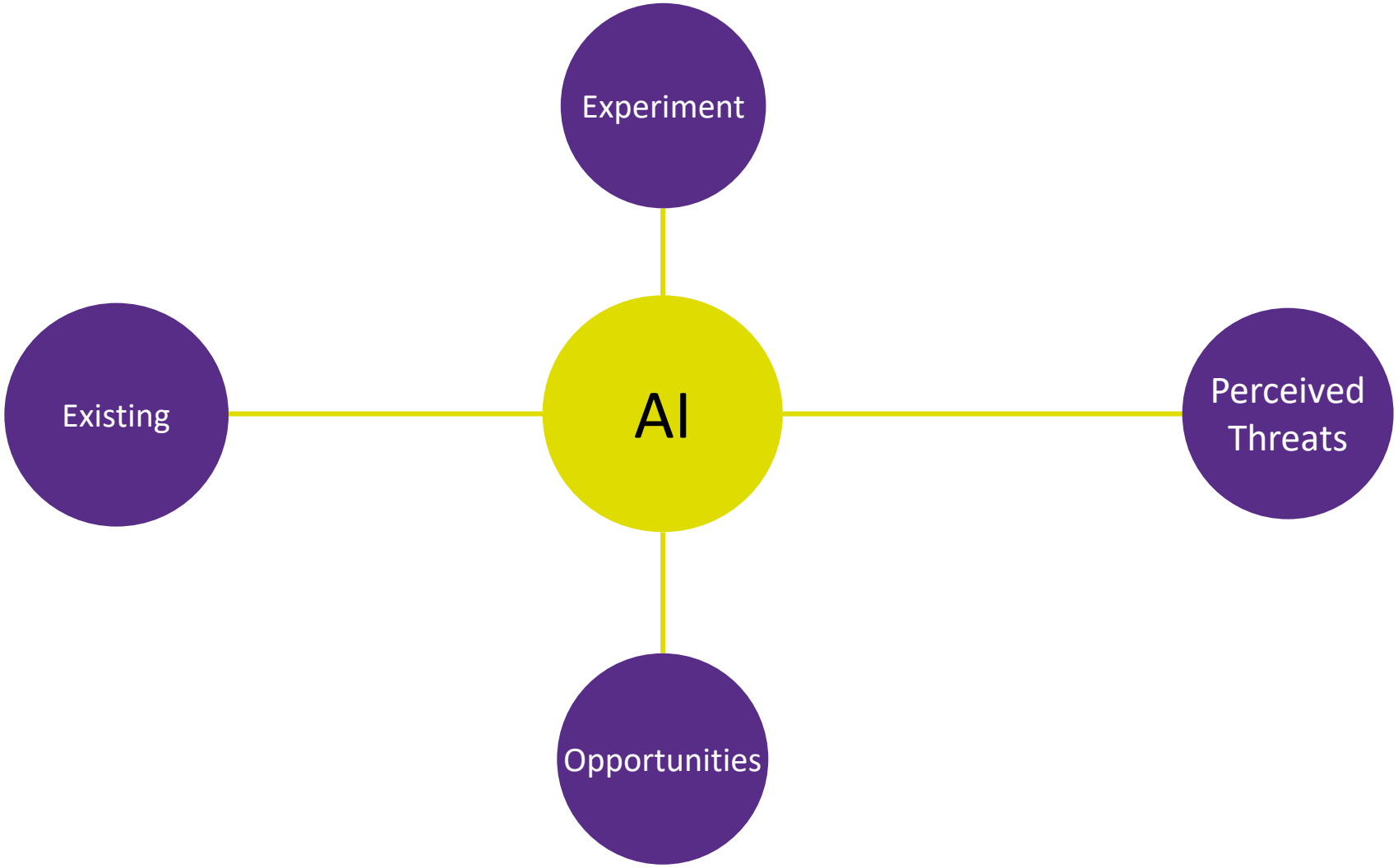
AI in the Spatial Industry



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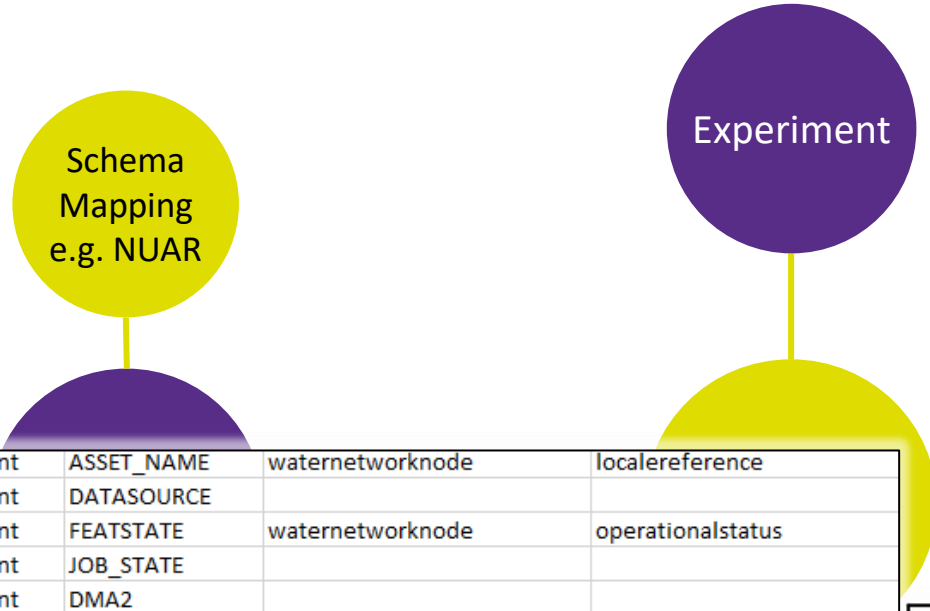

GW_METER_EXPORT_STANDARD_W_point	ASSET_NAME	waternetworknode	localereference
GW_METER_EXPORT_STANDARD_W_point	DATASOURCE		
GW_METER_EXPORT_STANDARD_W_point	FEATSTATE	waternetworknode	operationalstatus
GW_METER_EXPORT_STANDARD_W_point	JOB_STATE		
GW_METER_EXPORT_STANDARD_W_point	DMA2		
GW_METER_EXPORT_STANDARD_W_point	PATH_COST		
GW_METER_EXPORT_STANDARD_W_point	DMA		
GW_METER_EXPORT_STANDARD_W_point	NODE_2_ID		
GW_METER_EXPORT_STANDARD_W_point	NODE_1_ID		
GW_METER_EXPORT_STANDARD_W_point	ORIGWMSJOB		
GW_METER_EXPORT_STANDARD_W_point	CURRJOBID		
GW_METER_EXPORT_STANDARD_W_point	ORIGJOBID		
GW_METER_EXPORT_STANDARD_W_point	INSTALDATE	waternetworknode	dateofinstallation
GW_METER_EXPORT_STANDARD_W_point	EDITED_BY		
GW_METER_EXPORT_STANDARD_W_point	YEARPLACE		
GW_METER_EXPORT_STANDARD_W_point	INSPDATE		
GW_METER_EXPORT_STANDARD_W_point	JOB_ID		
GW_METER_EXPORT_STANDARD_W_point	DIGITISBY		
GW_METER_EXPORT_STANDARD_W_point	UPDATED_DA	waternetworknode	dateoflaststatuschange
GW_METER_EXPORT_STANDARD_W_point	DGTSDDATE		
GW_METER_EXPORT_STANDARD_W_point	ASSET_TYPE		
GW_METER_EXPORT_STANDARD_W_point	INT_DIAM	waternetworknode	insidewidth_width
GW_METER_EXPORT_STANDARD_W_point	STORAGECAP		
GW_METER_EXPORT_STANDARD_W_point	DIAM_UNIT	waternetworknode	insidewidth_unitofmeasure

Perceived Threats

SourceClass	SourceAttribute	SourceValue	TargetAttribute	TargetValue
AbandonedPipe	PRESSURETIER	I	conveyancemethod	Intermediate Pressure
AbandonedPipe	PRESSURETIER	L	conveyancemethod	Low Pressure
AbandonedPipe	PRESSURETIER	M	conveyancemethod	Medium Pressure
AbandonedPipe	PRESSURETIER	RH	conveyancemethod	Regional High Pressure
AbandonedPipe	DIAMETERUNITS	I	insidewidth_unitofmeasure	Inches
AbandonedPipe	DIAMETERUNITS	M	insidewidth_unitofmeasure	Millimetres
AbandonedPipe	MATERIAL	AS	material	Asbestos Cement
AbandonedPipe	MATERIAL	CI	material	Cast Iron
AbandonedPipe	MATERIAL	CO	material	Concrete
AbandonedPipe	MATERIAL	DI	material	Ductile Iron
AbandonedPipe	MATERIAL	PE	material	Plastic
AbandonedPipe	MATERIAL	PV	material	PVC
AbandonedPipe	MATERIAL	SI	material	Spun Iron
AbandonedPipe	MATERIAL	ST	material	Steel
AsBuiltPipe	MATERIAL		material	
AsBuiltPipe	MATERIAL	CI	material	Cast Iron
AsBuiltPipe	MATERIAL	DI	material	Ductile Iron
AsBuiltPipe	MATERIAL	FP	material	
AsBuiltPipe	MATERIAL	pe	material	Plastic
AsBuiltPipe	MATERIAL	PE	material	Plastic
AsBuiltPipe	MATERIAL	SI	material	Spun Iron
AsBuiltPipe	MATERIAL	ST	material	Steel

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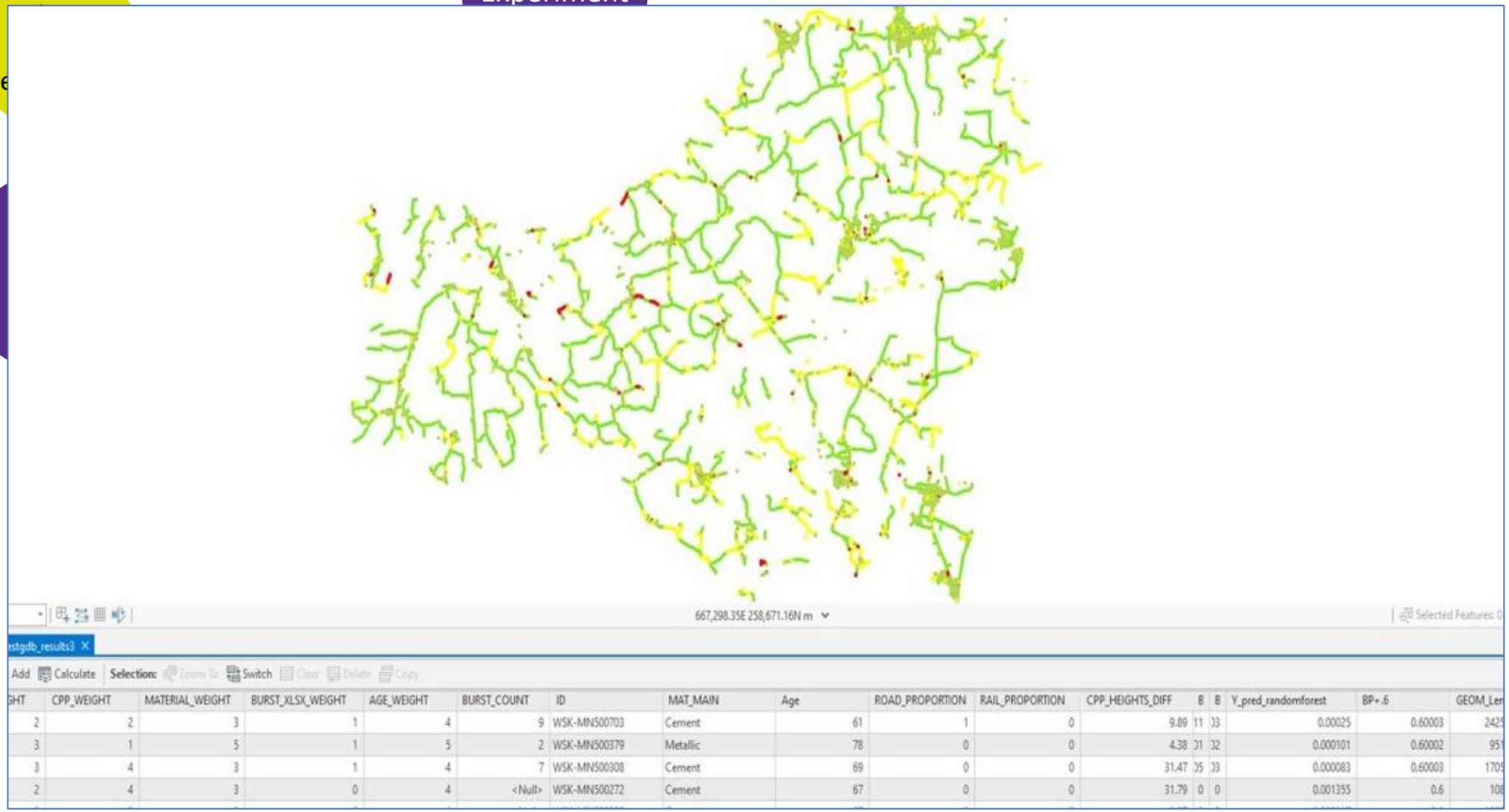
Experiment

Pipe Leakage Prediction



GHT	CPP_WEIGHT	MATERIAL_WEIGHT	BURST_XLSX_WEIGHT	AGE_WEIGHT	BURST_COUNT	ID	MAT_MAIN	Age	ROAD_PROPORTION	RAIL_PROPORTION	CPP_HEIGHTS_DIFF	B	B	Y_pred_randomforest	BP+.6	GEOM_Len
2	2	3	1	4	9	WSK-MN500703	Cement	61	1	0	9.89	11	33	0.00025	0.60003	2425
3	1	5	1	5	2	WSK-MN500379	Metallic	78	0	0	4.38	31	32	0.000101	0.60002	957
3	4	3	1	4	7	WSK-MN500308	Cement	69	0	0	31.47	35	33	0.000083	0.60003	1705
2	4	3	0	4	<Null>	WSK-MN500272	Cement	67	0	0	31.79	0	0	0.001355	0.6	108

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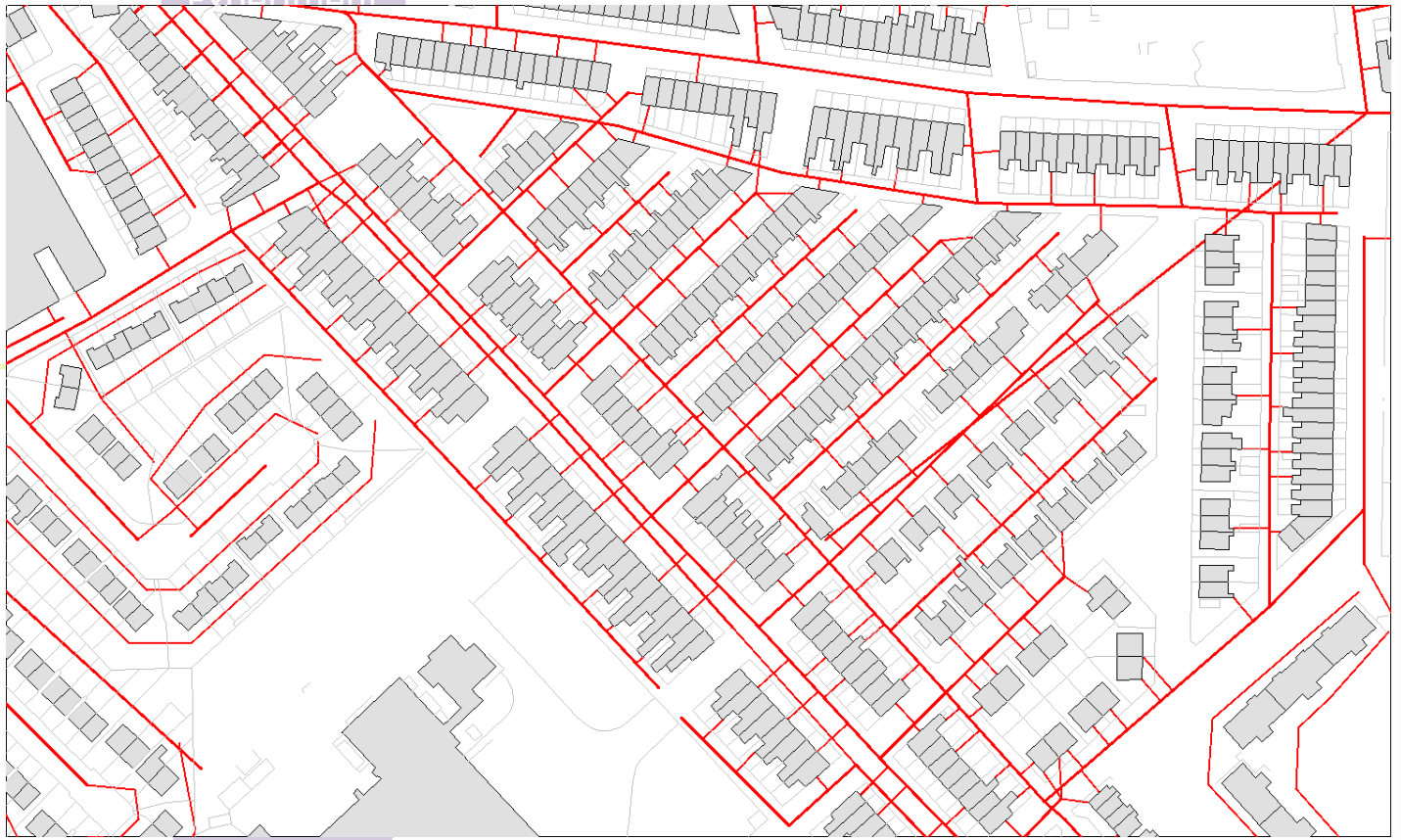
Schema Mapping e.g. NUAR

Pipe Leakage Prediction

Existing

Sewer Inference



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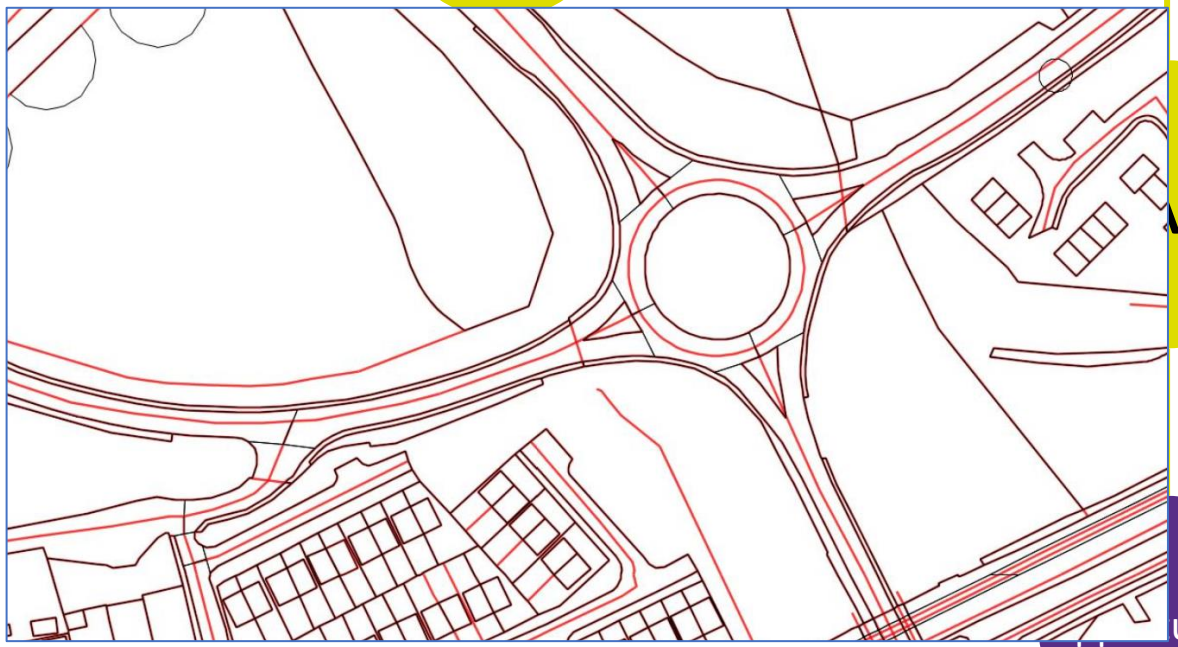
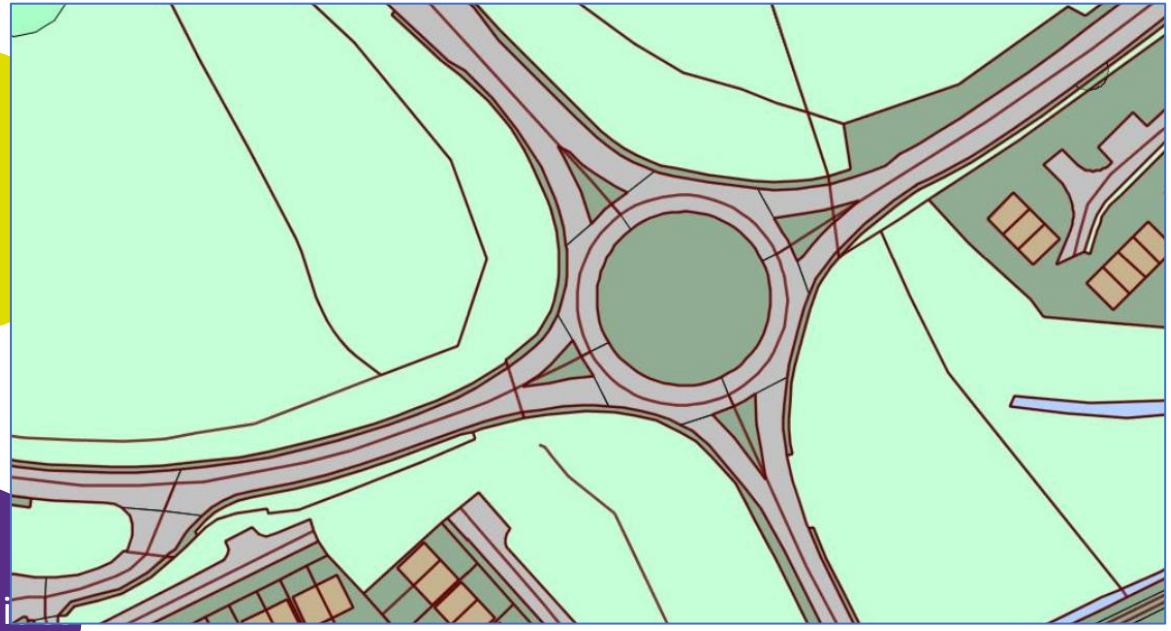
Schema Mapping e.g. NUAR

Polygon Classification

Experiment





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Polygon Classification

Experiment

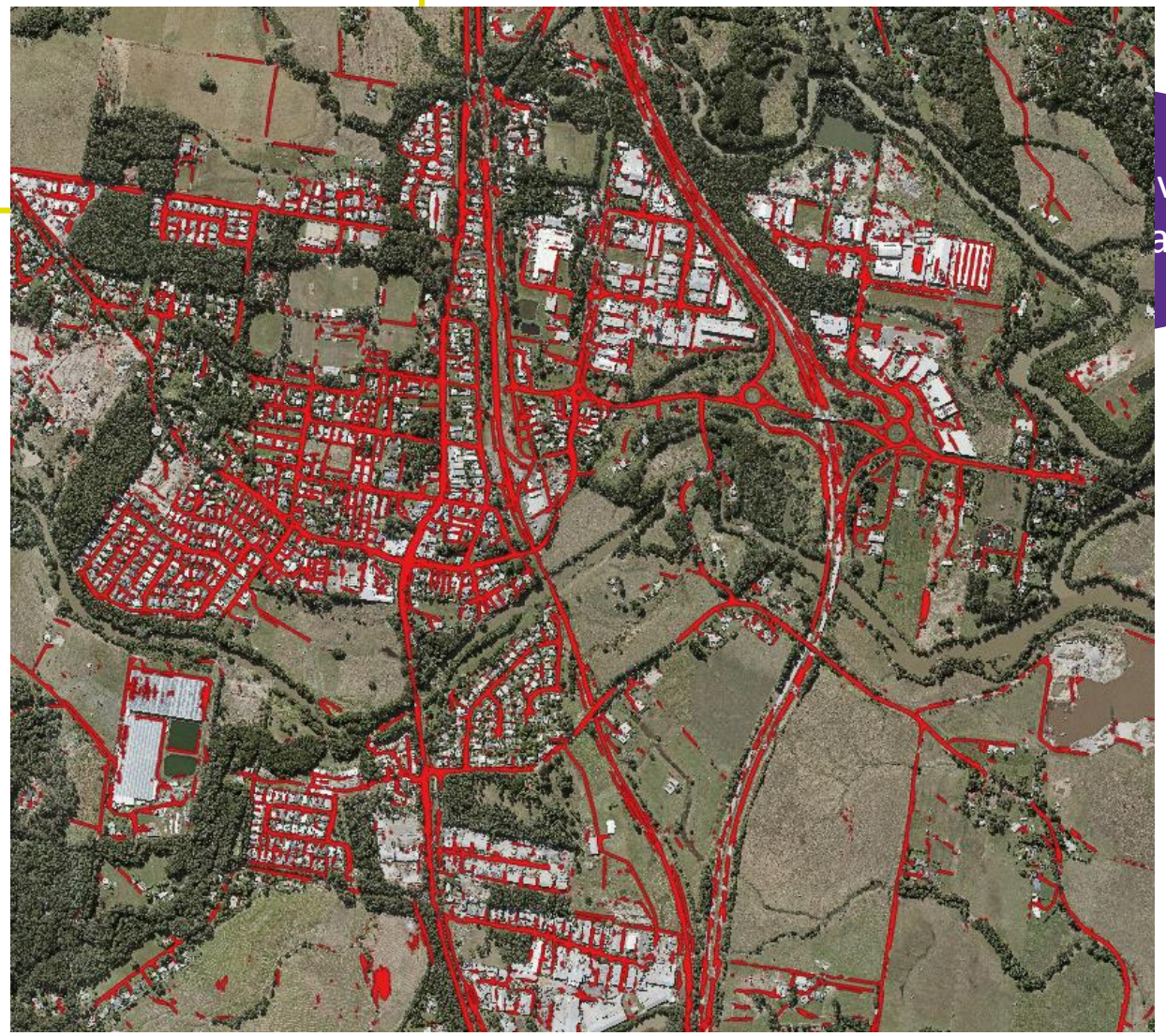
Vectors from Imagery

Schema Mapping e.g. NUAR

Pipe Leakage Prediction

Existing

Sewer Inference



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Schema Mapping

Polygon Classification

Experiment

Vectors from Imagery

AI Data Capture replaces NMA

Perceived Threats

Pipe Leakage Prediction

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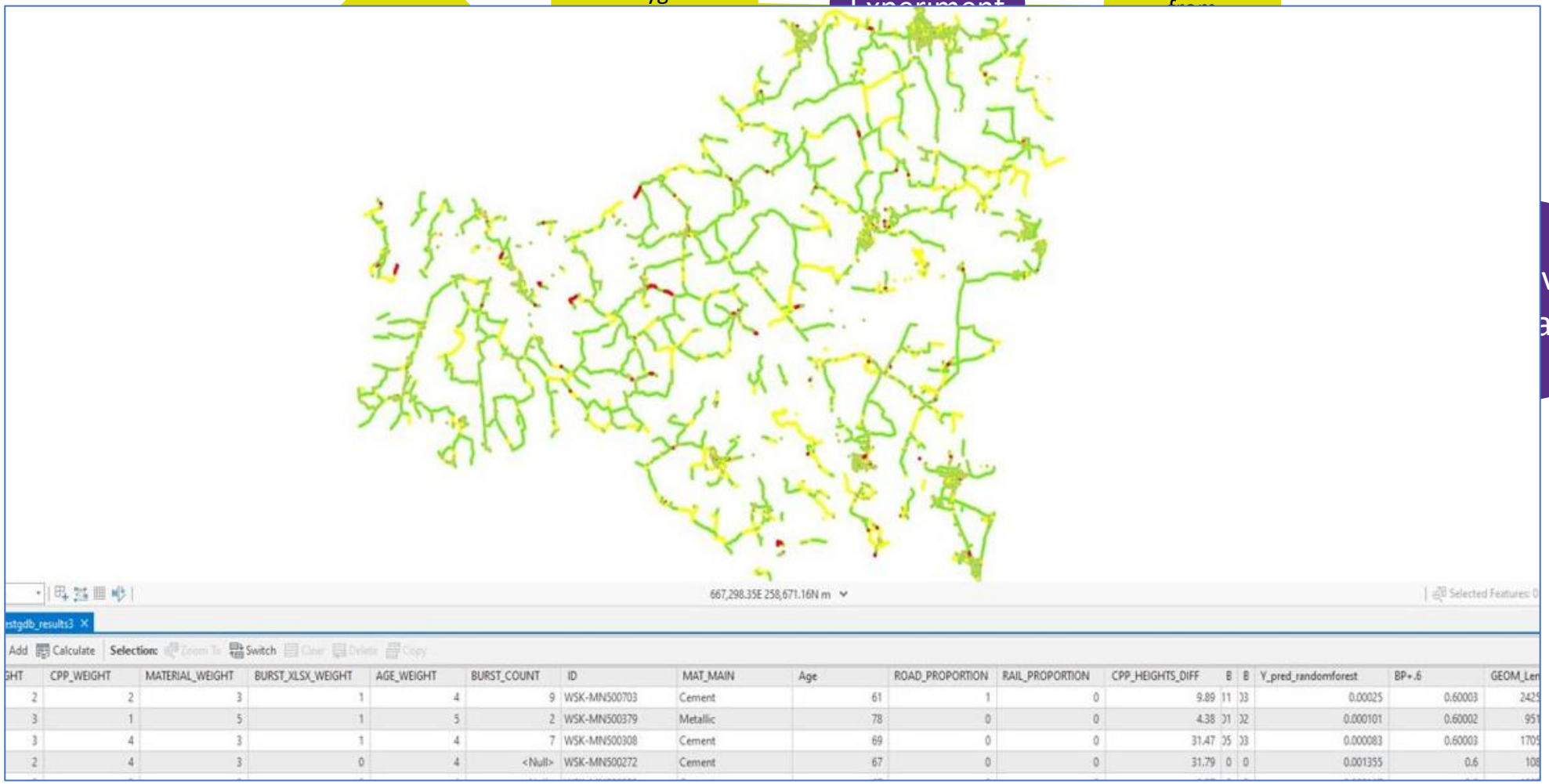
Polygon

Vectors

AI Data Capture replaces NMA

AI Process avoids the need for data



CPP_WEIGHT	MATERIAL_WEIGHT	BURST_XLSX_WEIGHT	AGE_WEIGHT	BURST_COUNT	ID	MAT_MAIN	Age	ROAD_PROPORTION	RAIL_PROPORTION	CPP_HEIGHTS_DIFF	Y_pred_randomforest	BP+.6
2	3	1	4	9	WSK-MN500703	Cement	61	1	0	9.89	0.00025	0.60003
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4	3	1	4	7	WSK-MN500308	Cement	69	0	0	31.47	0.000083	0.60003
4	3	0	4	<Null>	WSK-MN500272	Cement	67	0	0	31.79	0.001355	0.6

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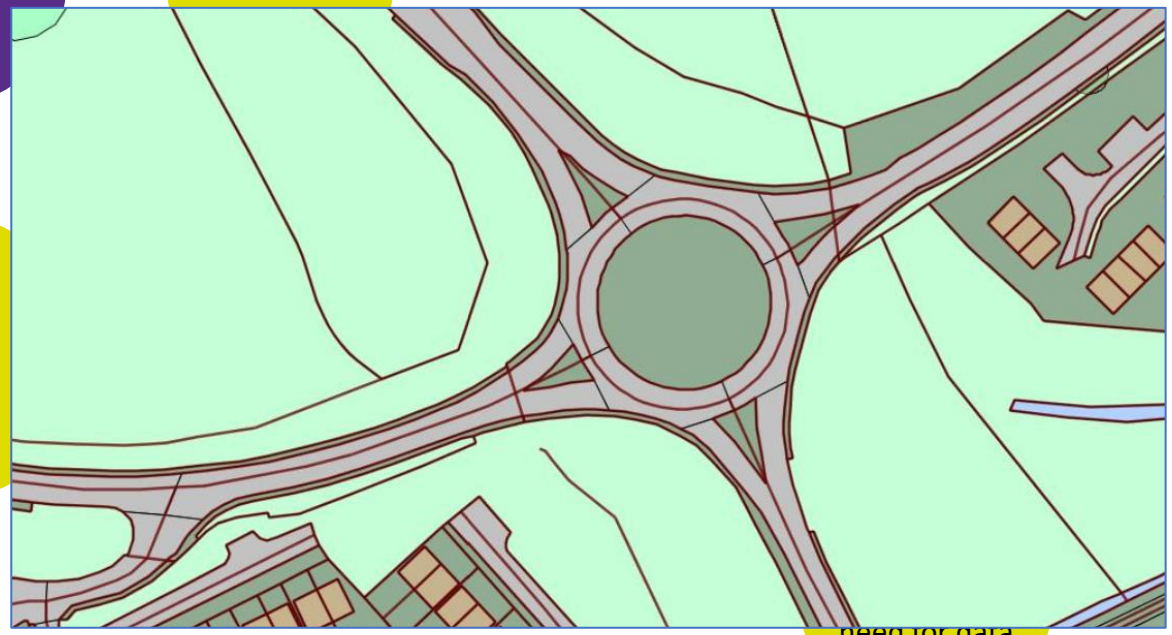
Polygon

Experiment

Vectors from



need for data

Sewer Inference

More Generative Inference

Opportunities

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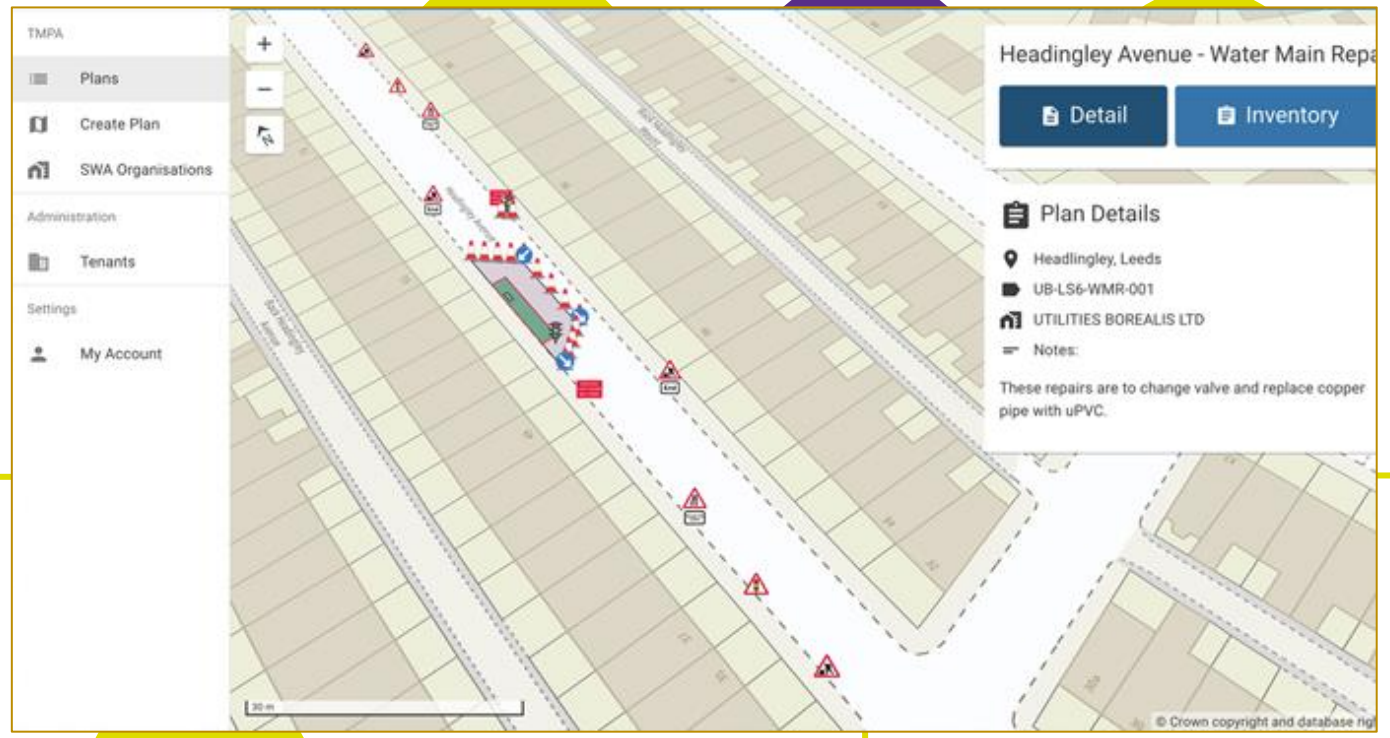
Pipe Leakage Prediction

Sewer Inference



More Generative Inference

Opportunities

Spatial Decision Support

Perceived Threats

AI Data Capture replaces NMA

AI Process avoids the need for data

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Schema Mapping e.g. NUAR

Pipe Leakage Prediction

Existing

Sewer Inference

Spatial Decision Support

Code and Doc Writing Support

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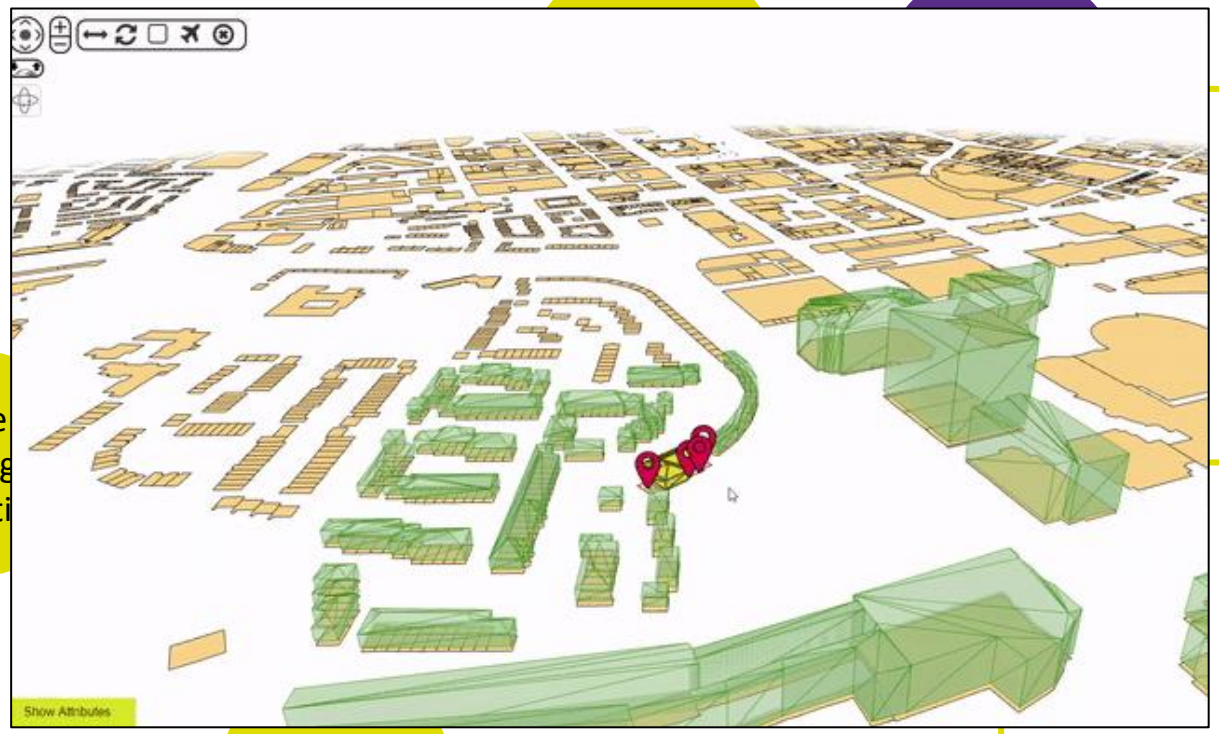

Vectors from Imagery

Pipe Leakag Predicti

Sewer Inference

Perceived Threats

AI Data Capture replaces NMA

AI Process avoids the need for data

Opportunities

More Generative Inference

Check and clean AI output data

Spatial Decision Support

Code and Doc Writing Support

Check and clean AI input data for bias

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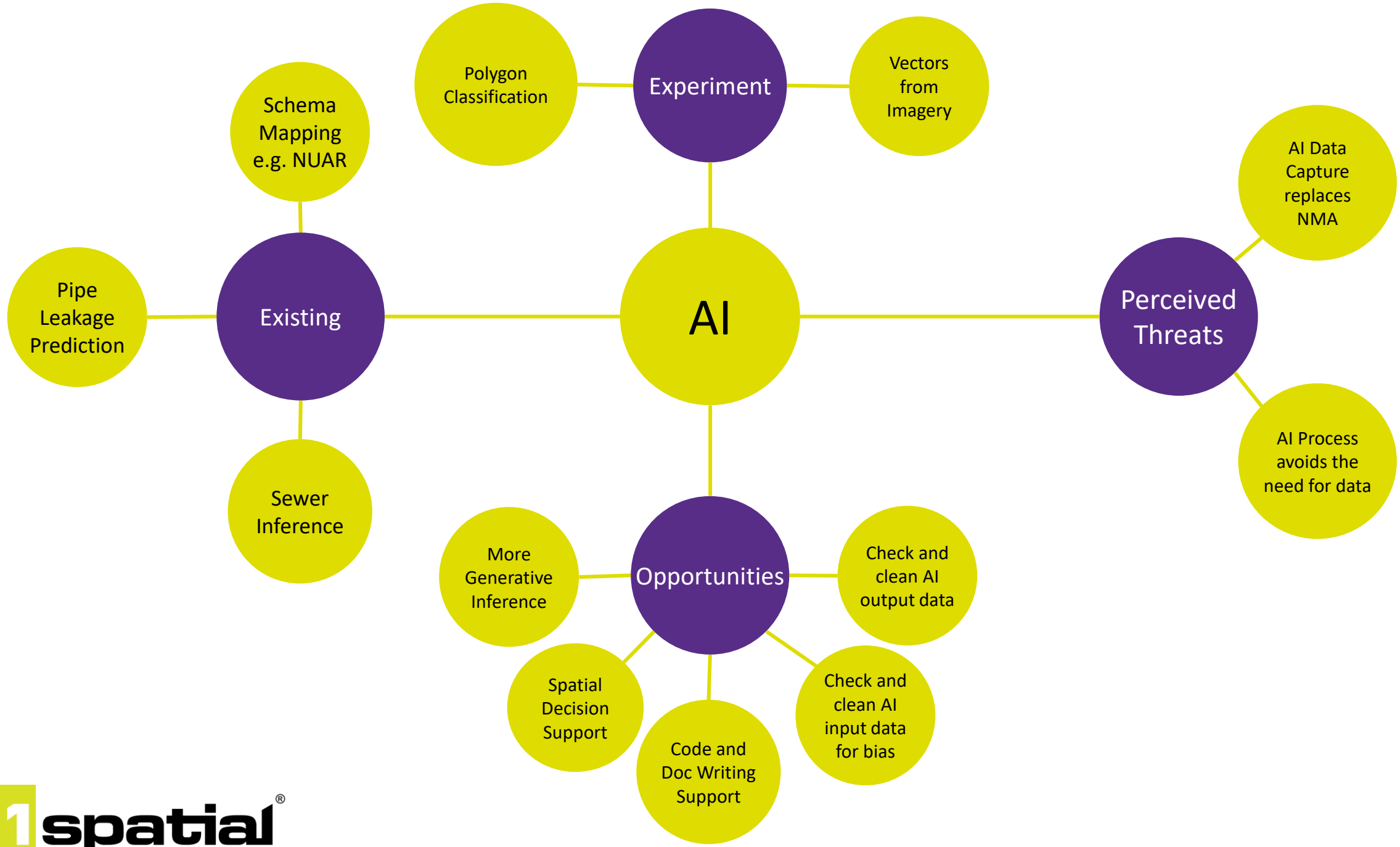

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