

ASSET INSPECTION & MANAGEMENT



How do you inspect your assets for maintenance?

Asset Inspection Software	20%
Custom Internal Software	22%
Other	8%
Paper forms	43%
Visual	7%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Asset Inspection Software	5%	0%	22%	13%	33%	6%	19%	43%	23%
Custom Internal Software	15%	0%	33%	27%	17%	33%	31%	10%	23%
Other	10%	40%	11%	7%	0%	11%	6%	3%	8%
Paper forms	65%	40%	33%	47%	50%	33%	38%	37%	46%
Visual	5%	20%	0%	7%	0%	17%	6%	7%	0%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Asset Inspection Software	14%	13%	31%	28%
Custom Internal Software	29%	29%	21%	12%
Other	0%	10%	7%	16%
Paper forms	29%	35%	34%	40%
Visual	29%	13%	7%	4%

Facility Operators | Other

	F	O
Asset Inspection Software	21%	17%
Custom Internal Software	19%	28%
Other	8%	9%
Paper forms	46%	39%
Visual	7%	7%

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At what frequency do you inspect your assets?

1 year or less	54%
2-3 years	23%
4-5 years	5%
More than 5 years	2%
Only when conditions indicate	16%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
1 year or less	35%	20%	56%	73%	17%	61%	44%	60%	58%
2-3 years	5%	60%	33%	17%	33%	17%	28%	30%	25%
4-5 years	0%	0%	0%	3%	0%	0%	17%	10%	0%
More than 5 years	5%	0%	0%	0%	17%	0%	0%	0%	8%
Only when conditions indicate	55%	20%	11%	7%	33%	22%	11%	0%	8%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
1 year or less	50%	61%	51%	44%
2-3 years	30%	11%	33%	31%
4-5 years	10%	5%	5%	3%
More than 5 years	10%	2%	0%	3%
Only when conditions indicate	0%	21%	12%	19%

Facility Operators | Other

	F	O
1 year or less	54%	53%
2-3 years	22%	24%
4-5 years	7%	0%
More than 5 years	1%	4%
Only when conditions indicate	16%	18%

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What is the biggest difficulty you face with asset inspection?

Accessing historical data	29%
Downtime/disruption of normal operations	45%
Inspection Costs	15%
Reporting required repairs	11%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Accessing historical data	10%	20%	22%	40%	50%	25%	17%	41%	18%
Downtime/disruption of normal operations	50%	80%	44%	40%	17%	38%	39%	48%	55%
Inspection Costs	20%	0%	22%	10%	33%	19%	22%	7%	18%
Reporting required repairs	20%	0%	11%	10%	0%	19%	22%	3%	9%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Accessing historical data	10%	32%	33%	24%
Downtime/disruption of normal operations	70%	41%	44%	44%
Inspection Costs	10%	14%	14%	21%
Reporting required repairs	10%	13%	9%	12%

Facility Operators | Other

	F	O
Accessing historical data	29%	26%
Downtime/disruption of normal operations	46%	40%
Inspection Costs	13%	21%
Reporting required repairs	12%	12%

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What is the most common reason for asset failure?

Failure to perform preventative maintenance	29%
Irregular inspections	14%
Operate to failure mentality	29%
Other	12%
Poor quality preventative maintenance	16%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Failure to perform preventative maintenance	25%	40%	22%	23%	33%	56%	31%	23%	23%
Irregular inspections	25%	0%	11%	13%	0%	11%	13%	20%	8%
Operate to failure mentality	20%	40%	56%	27%	17%	11%	44%	37%	15%
Other	10%	20%	11%	7%	33%	11%	6%	17%	15%
Poor quality preventative maintenance	20%	0%	0%	30%	17%	11%	6%	3%	38%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Failure to perform preventative maintenance	60%	39%	40%	31%
Irregular inspections	0%	16%	14%	17%
Operate to failure mentality	20%	25%	14%	19%
Other	10%	5%	16%	14%
Poor quality preventative maintenance	10%	16%	16%	19%

Facility Operators | Other

	F	O
Failure to perform preventative maintenance	26%	37%
Irregular inspections	17%	9%
Operate to failure mentality	32%	22%
Other	11%	15%
Poor quality preventative maintenance	15%	17%

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What factors most contribute to poor decision making for asset maintenance?

Budget constraints	36%
Bureaucracy	17%
Incorrect information	21%
Lack of field experience	17%
Limited access to information	9%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Budget constraints	45%	20%	67%	20%	50%	6%	56%	43%	38%
Bureaucracy	10%	40%	0%	27%	33%	18%	6%	10%	31%
Incorrect information	5%	0%	11%	23%	17%	41%	25%	23%	15%
Lack of field experience	20%	20%	11%	23%	0%	18%	6%	20%	15%
Limited access to information	20%	20%	11%	7%	0%	18%	6%	3%	0%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Budget constraints	20%	36%	33%	44%
Bureaucracy	10%	18%	21%	14%
Incorrect information	50%	20%	21%	14%
Lack of field experience	20%	11%	21%	22%
Limited access to information	0%	16%	5%	6%

Facility Operators | Other

	F	O
Budget constraints	38%	33%
Bureaucracy	16%	20%
Incorrect information	19%	24%
Lack of field experience	19%	13%
Limited access to information	9%	9%

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Which part of asset management most needs to improve?

Accurate mapping	28%
Budgeting	26%
Communication and sharing of location, description & historical data	28%
Field inspection processes	17%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory

Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Accurate mapping	11%	60%	13%	27%	17%	44%	27%	30%	38%
Budgeting	47%	0%	38%	13%	0%	11%	40%	30%	38%
Communication and sharing of location, description & historical data	21%	0%	38%	37%	67%	28%	13%	27%	23%
Field inspection processes	21%	40%	13%	23%	17%	17%	20%	13%	0%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Accurate mapping	10%	35%	34%	17%
Budgeting	20%	26%	17%	40%
Communication and sharing of location, description & historical data	50%	26%	24%	26%
Field inspection processes	20%	12%	24%	17%

Facility Operators | Other

	F	O
Accurate mapping	26%	33%
Budgeting	28%	22%
Communication and sharing of location, description & historical data	25%	33%
Field inspection processes	20%	11%

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What is the best way to reduce asset inspection/maintenance costs?

Better planning	55%
Better real time decisions	19%
Increased spending/budget	26%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Better planning	45%	40%	38%	61%	50%	82%	50%	50%	62%
Better real time decisions	30%	40%	13%	21%	0%	18%	6%	20%	15%
Increased spending/budget	25%	20%	50%	18%	50%	0%	44%	30%	23%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Better planning	78%	48%	52%	50%
Better real time decisions	22%	28%	19%	24%
Increased spending/budget	0%	24%	29%	26%

Facility Operators | Other

	F	O
Better planning	52%	64%
Better real time decisions	21%	14%
Increased spending/budget	27%	23%

ASSET INSPECTION & MANAGEMENT



What is your primary focus in protection of the utility infrastructure?

Easily accessible transparent data	12%
Education and training	27%
Efficient field inspection Procedures	12%
Regular maintenance	26%
Updated GIS to the field	24%

Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other

	C	E	N	G	R	L	P	W	O
Easily accessible transparent data	0%	0%	11%	17%	50%	0%	13%	17%	8%
Education and training	25%	60%	33%	37%	17%	22%	7%	17%	46%
Efficient field inspection Procedures	0%	0%	0%	3%	0%	39%	7%	23%	8%
Regular maintenance	40%	20%	22%	20%	33%	22%	33%	27%	15%
Updated GIS to the field	35%	20%	33%	23%	0%	17%	40%	17%	23%

Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Easily accessible transparent data	10%	9%	19%	8%
Education and training	30%	23%	26%	33%
Efficient field inspection Procedures	10%	16%	9%	8%
Regular maintenance	30%	25%	23%	31%
Updated GIS to the field	20%	27%	23%	19%

Facility Operators | Other

	F	O
Easily accessible transparent data	12%	11%
Education and training	25%	30%
Efficient field inspection Procedures	9%	17%
Regular maintenance	28%	22%
Updated GIS to the field	26%	20%

ASSET INSPECTION & MANAGEMENT



**What are the best ways to increase safety in asset maintenance?
(choose all that apply)**

Determine required compliance requirements	39%
Ensure a system is in place to rectify safety issues identified through maintenance	51%
Ensure all roles & responsibilities are identified & communicated	52%
Have a means of retaining & maintaining all information	51%
Have an audit system to ensure effective management of asset safety risks	37%
Identify all assets within scope of the management system	47%
Identify all relevant information & documentation in relation to assets	46%
Other	3%

**Communications | Electric | ENgineer | Gas & Oil | Gov't/Regulatory
Locator | Public Works | Water & Sewer | Other**

	C	E	N	G	R	L	P	W	O
Determine required compliance requirements	35%	40%	50%	47%	33%	39%	31%	23%	67%
Ensure a system is in place to rectify safety issues identified through maintenance	55%	80%	60%	50%	50%	61%	56%	37%	42%
Ensure all roles & responsibilities are identified & communicated	55%	60%	40%	50%	33%	56%	44%	57%	67%
Have a means of retaining & maintaining all information	40%	40%	50%	53%	67%	50%	63%	43%	75%
Have an audit system to ensure effective management of asset safety risks	40%	60%	40%	43%	50%	28%	31%	30%	42%
Identify all assets within scope of the management system	40%	80%	40%	50%	50%	44%	38%	50%	58%
Identify all relevant information & documentation in relation to assets	50%	60%	70%	43%	33%	28%	44%	47%	58%
Other	5%	0%	0%	7%	0%	0%	0%	0%	8%

ASSET INSPECTION & MANAGEMENT



Executive | Field Operator | Middle Management | Upper Management

	E	F	M	U
Determine required compliance requirements	20%	42%	31%	49%
Ensure a system is in place to rectify safety issues identified through maintenance	50%	44%	60%	49%
Ensure all roles & responsibilities are identified & communicated	30%	51%	62%	49%
Have a means of retaining & maintaining all information	10%	37%	71%	60%
Have an audit system to ensure effective management of asset safety risks	40%	35%	40%	37%
Identify all assets within scope of the management system	20%	49%	56%	40%
Identify all relevant information & documentation in relation to assets	30%	37%	51%	60%
Other	10%	2%	2%	3%

Facility Operators | Other

	F	O
Determine required compliance requirements	11%	14%
Ensure a system is in place to rectify safety issues identified through maintenance	15%	16%
Ensure all roles & responsibilities are identified & communicated	16%	15%
Have a means of retaining & maintaining all information	15%	17%
Have an audit system to ensure effective management of asset safety risks	12%	11%
Identify all assets within scope of the management system	15%	14%
Identify all relevant information & documentation in relation to assets	15%	13%
Other	1%	1%

ASSET INSPECTION & MANAGEMENT



Job Function

Executive (Owner, CEO, COO, President)	7%
Upper Management (Director, Manager)	25%
Middle Management (Supervisor/Foreman)	29%
Field Operations (Technician, Locator, Operator)	39%

Which category best describes the type of work you do?

Electrical	4%
Engineering	7%
Excavating	0%
Gas & Oil	22%
GIS Mapping	1%
Government/Regulatory	4%
One Call	2%
Public Works	12%
Communications	14%
Trenchless Technology	0%
Water & Sewer	21%
Locating	12%

Our thanks to PelicanCorp for helping to underwrite the cost of this research. Individual responses are not shared with the underwriter or sold in any way. Infrastructure Resources employees assisting with research will have access to responses as needed.