

Condition Assessment Survey Group Meeting

October 23, 2012

CAS Overview

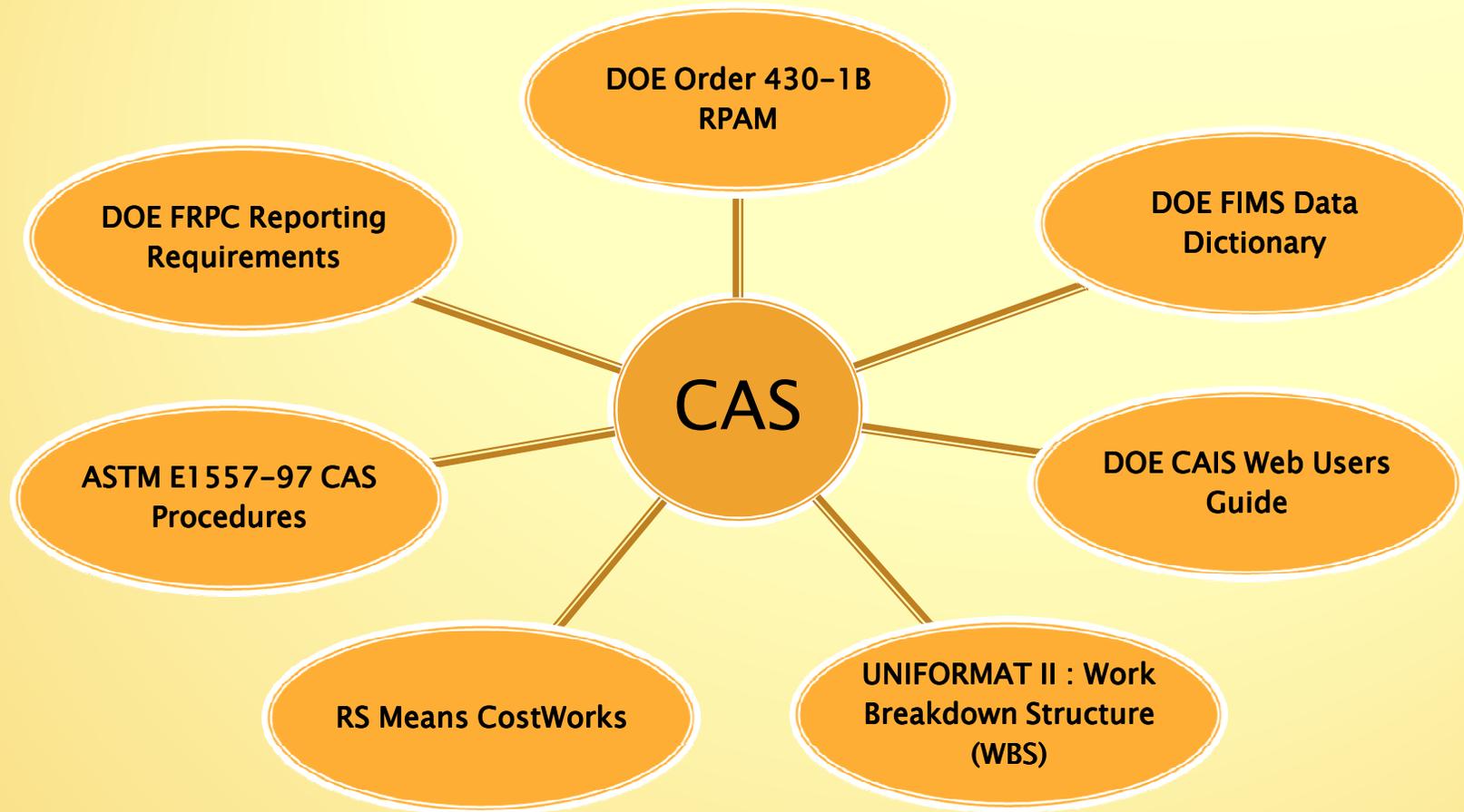
JG Management Systems, Inc.

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CAS Overview Methodology

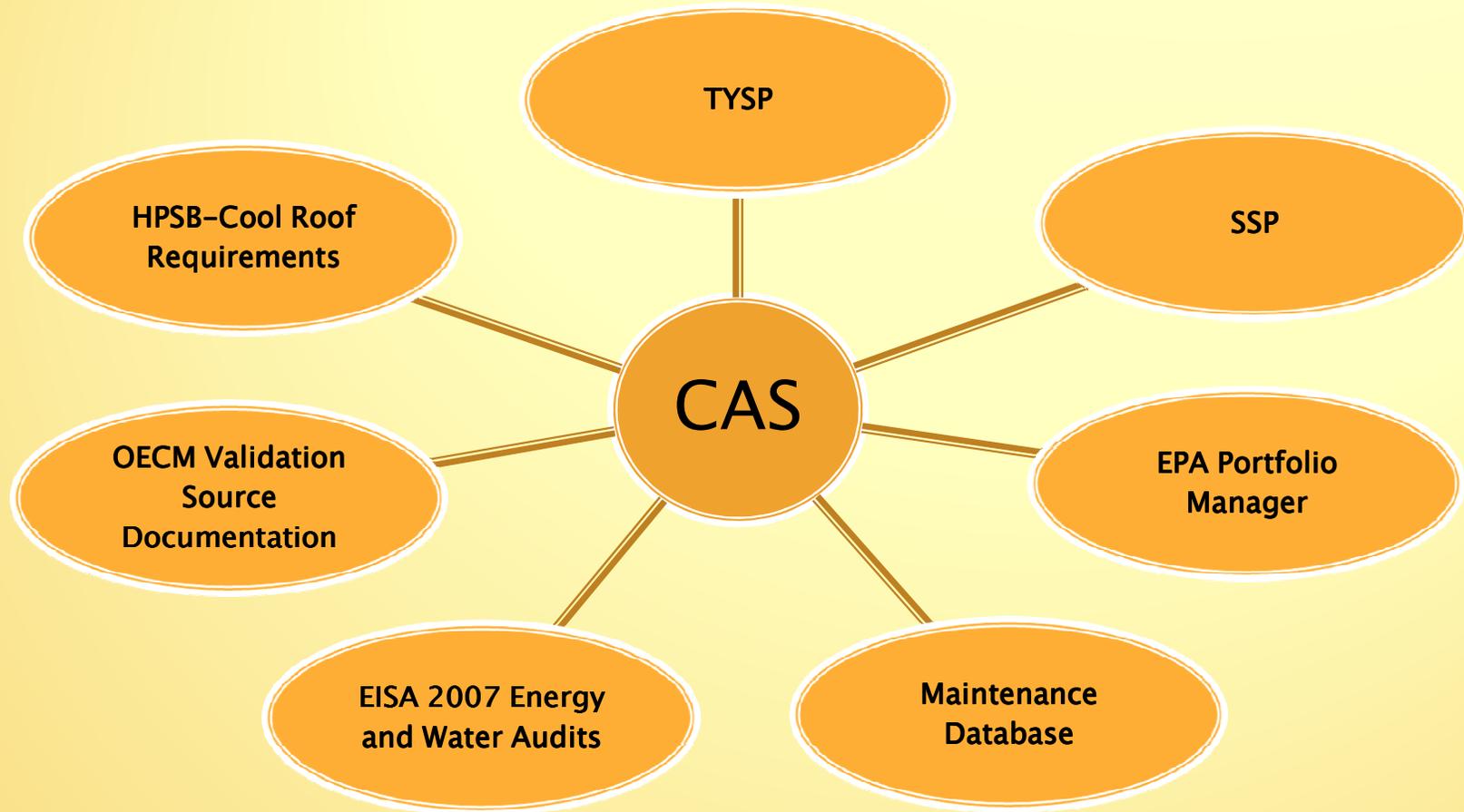
- Pre-Assessment Review–Analysis
- Conduct CAS Assessment
- Assessment Data Capturing methods
- Etc.

CAS Governing References



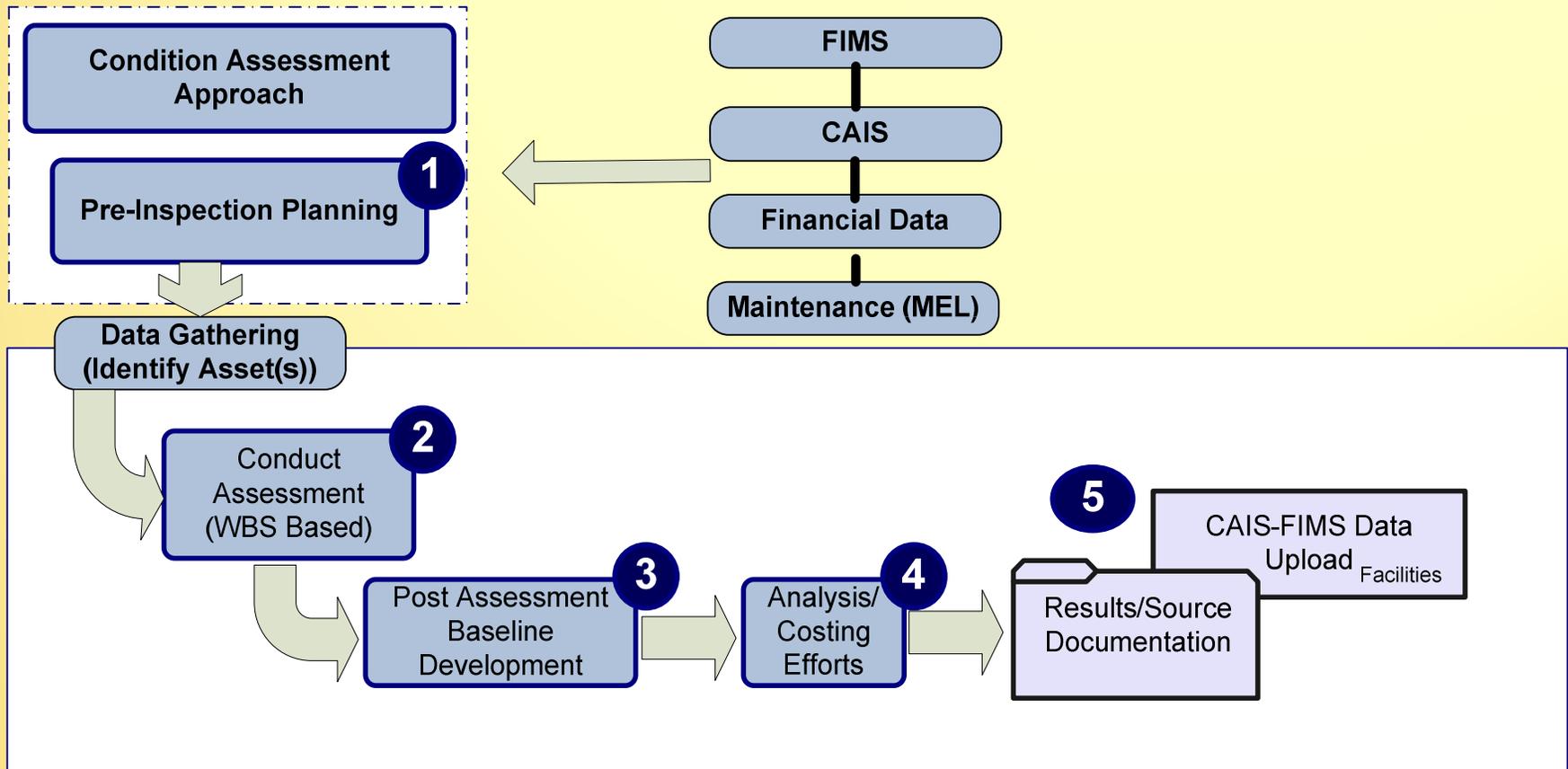
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CAS Data Feeds



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CAS Overview Methodology



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Work Breakdown Structure UNIFORMAT II

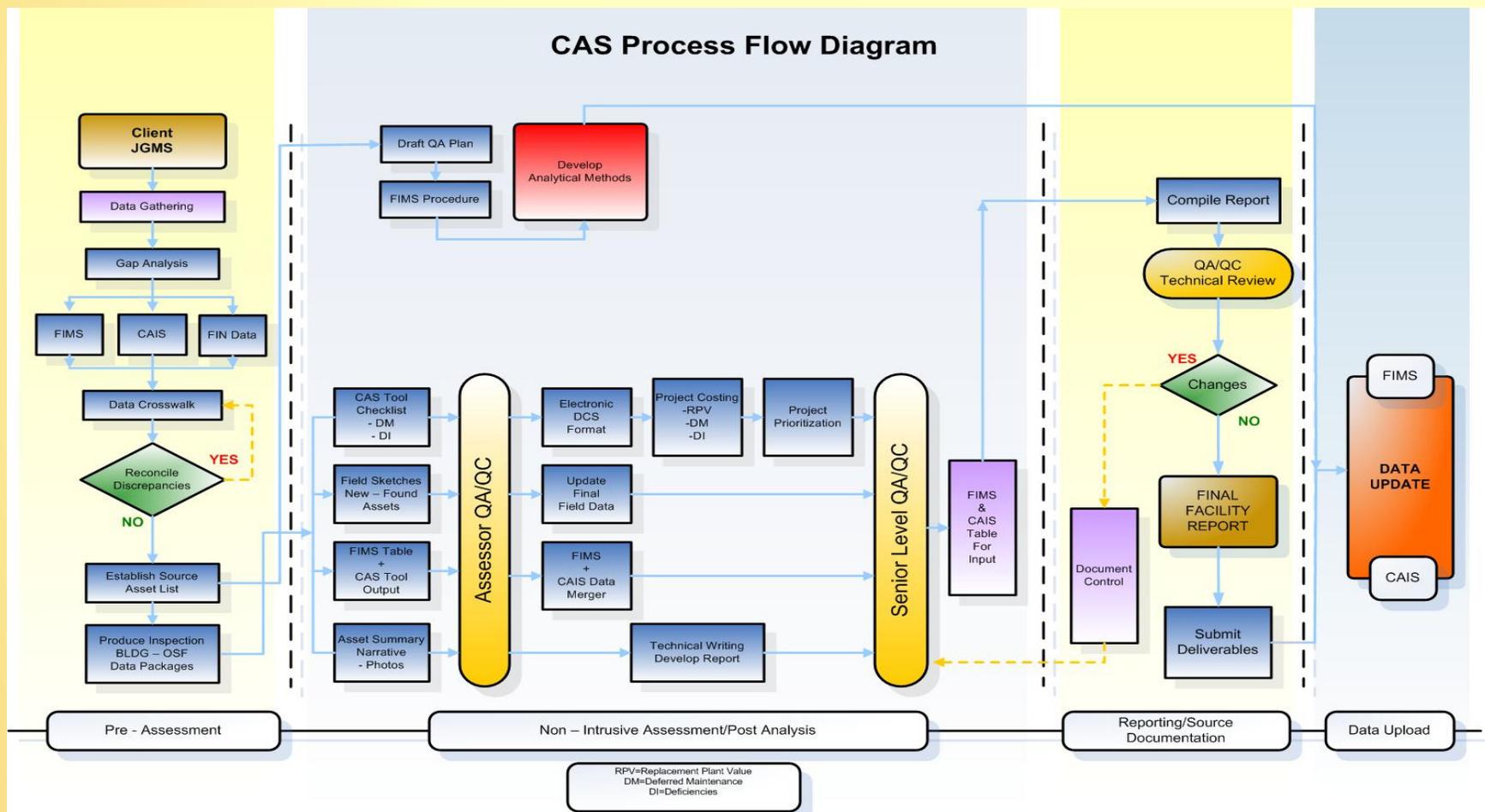
DOE CONDITION ASSESSMENT - WORK BREAKDOWN STRUCTURE UNIFORMAT II

SUBSTRUCTURE	SHELL	INTERIORS	CONVEYING SYSTEMS	SERVICES	FIRE PROTECTION	SPEC. CONST.	SITWORK					
FOUNDATIONS A10	SUPER-STRUCTURE B10	EXTERIOR B20	ROOFING B30	INTERIOR C10-PARTITIONS C30-INTERIOR	D10	D40	F10	G10	G30	G40	G90	
FOOTINGS Spread Strip Grade Beam	BEAMS Cast-in-Place Precast Concrete Steel	WALLS Concrete Masonry Stucco Stone Stone Veneer w/Straw Bales	BUILT-UP MEMBRANE SINGLE-PLY MEMBRANE METAL	PARTITIONS CONVENTIONAL Concrete / Masonry Structural Tile Drywall / Plaster	FLOOR FINISHING Carpet Composition / Resilient Flooring Floor (Concrete) Terrazzo Cork Tile Tile Wood	ELEVATORS Hydraulic Elevator Traction Elevator Escalators	FIRE PROTECTION Wet Pipe Sprinkler Dry Pipe Standpipe Halon Fire Suppression CO2 Fire Suppression	CANOPES LOADING DOCKS TANKS Elevated Buried Ground Level	PREPARATION Clearing Demolition Earthwork Haz Waste Remediation	COOLING Rotary Screw Chillers Chilled Water Distribution System	ELECTRICAL Switchyards Substations Overhead Transmission Water Underground Transmission System Lighting Communications/ Security	TUNNELS RAILWAYS & ROLLING STOCK Trackwork Signals & Comm. FOUNTAINS & POOLS SECURITY GATES & FENCES BRIDGES & ABUTMENTS
DAMP PROOFING WATERPROOFING EXCAVATION BACKFILL	PRE-ENGINEERED BUILDINGS Metal Wood	SIDING Metal Wood Plastic	COATED FOAM MEMBRANE SHINGLES TILES	PARTITIONS SPECIALTY TOILET PARTITIONS & ACCESSORIES	CEILINGS Drywall/Plaster Acoustical Wood Concrete Metal	SPECIAL Pneumatic Tube Systems Hoists and Cranes	DOMES BULK STORAGE METAL FRAMING LOUVERS & VENTS ACCESS FLOORS INTEGRATED CEILING MEZZANINE STRUCTURES WASTE HANDLING DEMOLITION Building Elements Electrical Hazardous Components Abatement	G20 SITE IMPROVEMENTS Road and Walks Parking Roads Walks LANDSCAPING FLAGPOLES SIGNAGE	UTILITY DISTRIBUTION SYSTEMS PLUMBING Water Treatment Plant Water Distribution System Wastewater Sewage & Drainage Collection Systems Wastewater Treatment Plant Gas Distribution System HEATING Fuel Oil Storage & Distribution Goat Handling Sys High Temperature Water Distribution Steam Distribution & Condensate Boilers	UTILITY DISTRIBUTION NATURAL GAS Steel Towers & Poles Product Concrete Poles Wood Poles Tower & Pole Foundations Utility Service Tunnels Utility Service Tunnels - Demo preloading / Waterproofing Concrete Support Pads	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	
PILES CAISSONS	FLOORS CIP Concrete Precast Concrete Steel Composite Wood	EXTERIOR INSULATION & FINISH WALL DOORS	PARAPETS ROOF SPECIALTIES HATCHES SKYLIGHTS DRAINAGE GUNITE CANOPIES	INTERIOR Doors Cabinets Fittings C29 STAIRS CIP Concrete Precast Steel Composite Wood Ladders	PAINT FINISHES / COATINGS Conventional Special FINISHES WALL COVERING Coverings Paneling Tile	D20 PLUMBING SYSTEMS PLUMBING Domestic Water Drain, Waste & Vent Compressed Air Vacuum Natural Gas SPECIAL SYSTEMS Drinking Water Waste SYSTEMS	SPECIAL ELECTRICAL SYSTEMS SERVICE & DISTRIBUTION Service Entrance Low Voltage Distribution Medium Voltage Distribution LIGHTING Luminaires SPECIAL SYSTEMS Cable Trays Communication Circuits Control Units Hot Data Proc. Elec. Equip. Generators Hoisting Baseboard Rad. Lightning Prot. & Surge Supp. Petrol. Disp.Fac. Signal Circuits Uninterruptible Power Supplies	F20 SPECIALTY CONSTR. DEMO	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	
A20 SUB-STRUCTURE SLABS ON-GRADE COLUMNS CIP Concrete Precast Metal Wood COLUMN FIREPROOFING	ROOF STRUCTURE CIP Concrete Steel Precast Wood FIRE-PROOFING CIP Concrete Precast Steel Composite Wood Ladders	WINDOWS & GLAZED DRAINAGE WALLS Clazed Curtain Walls PAINT FINISHES / COATINGS Conventional Special Finishest	SHADING CAR INSPECTOR TYPE	Civil / Structural / Roof Electrical Mechanical	RENEWABLE Fuel Cells Solar Energy Wind Energy Energy Efficiency	HEATING & VENTILATING Fuel Oil Boilers Hot Air Furnaces Hot Water Distribution Steam Distribution & Condensate Return Chemical Treatment Terminal Units Air Handlers & Fans Ductwork	HEATING & VENTILATING Fuel Oil Boilers Hot Air Furnaces Hot Water Distribution Steam Distribution & Condensate Return Chemical Treatment Terminal Units Air Handlers & Fans Ductwork	MEZZANINE STRUCTURES WASTE HANDLING DEMOLITION Building Elements Electrical Hazardous Components Abatement	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	STORM SEWER Well Systems Headwalls & Catchbasins UNDERGROUND TRANSPORT	

1-May-09

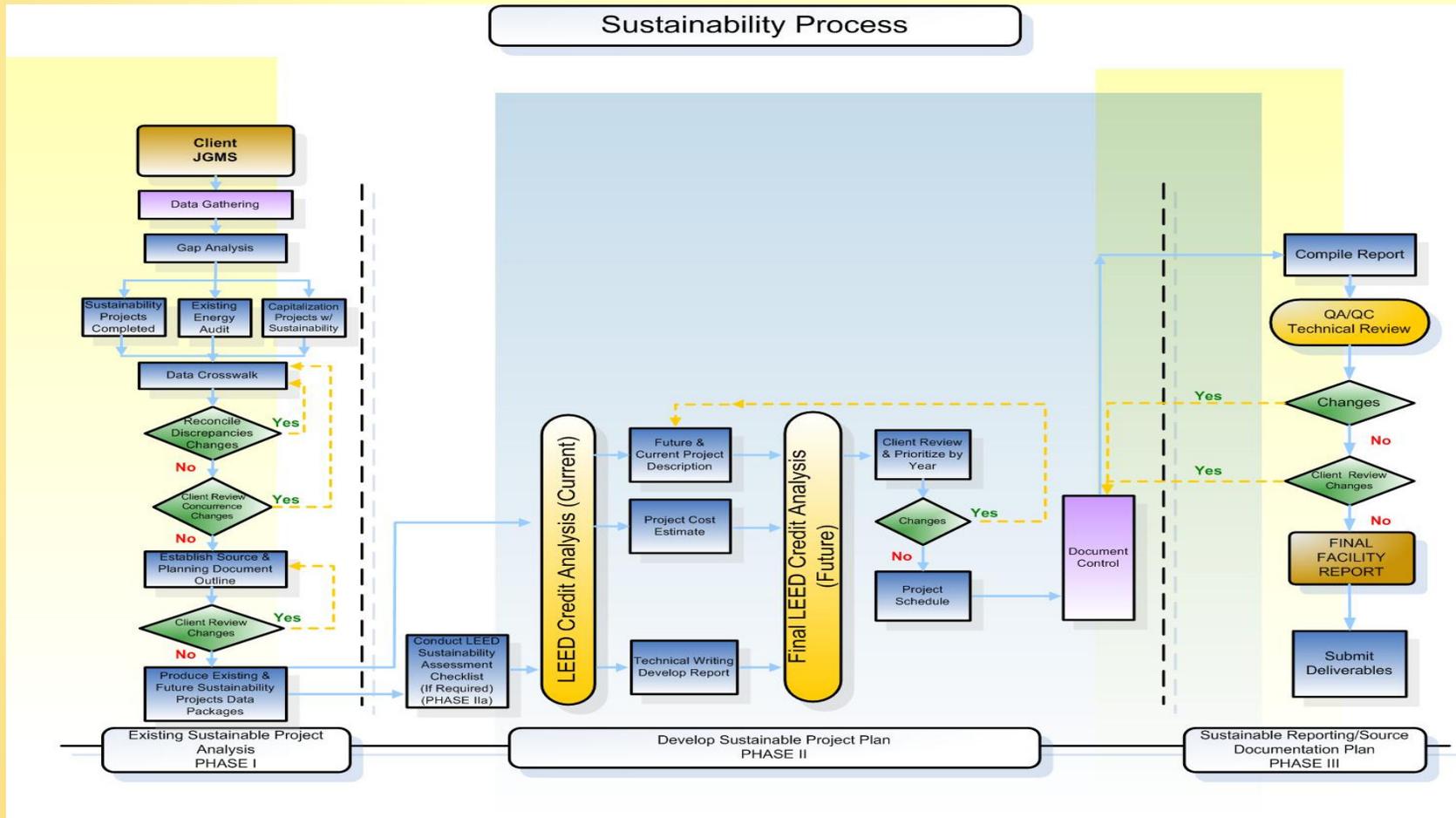
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CAS Assessment Methodology



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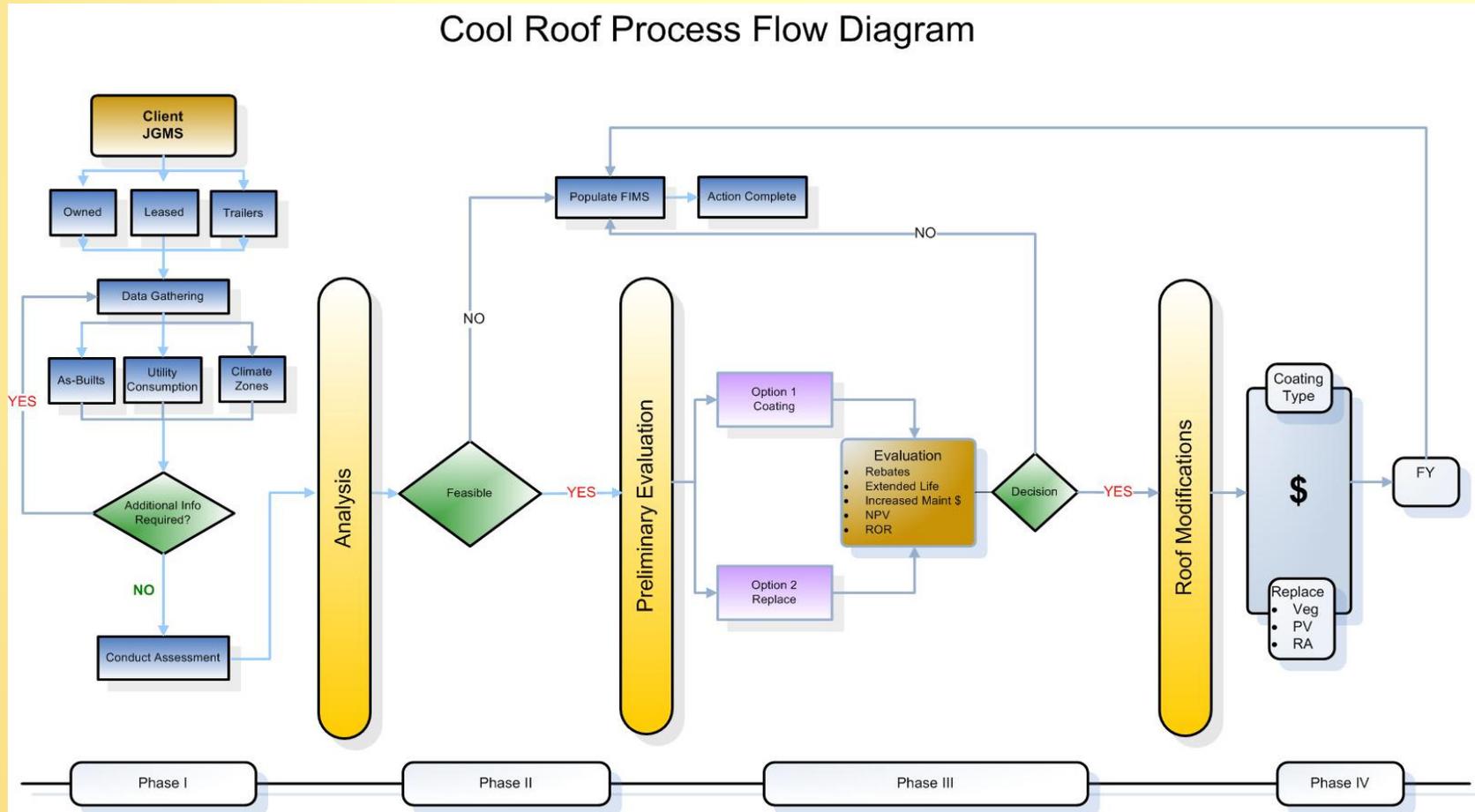
Sustainability Methodology



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Cool Roof Methodology

Cool Roof Process Flow Diagram



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Assessment & Data Management Constraints

- Consistent Data
- Excessive Data Capturing Instruments
 - Cameras, Pen & Paper, Clipboards, Measuring Instruments
- Limited Amount of Asset Data
 - FIMS Information , drawings, other asset documentation
- Transposing Data From Assessment to Report Format
- Transferring Assessment to a Storage Device
- Data Loss

JGMS Solution

JGMS' solution was to create a tool that would reduce the constraints presented in the past.

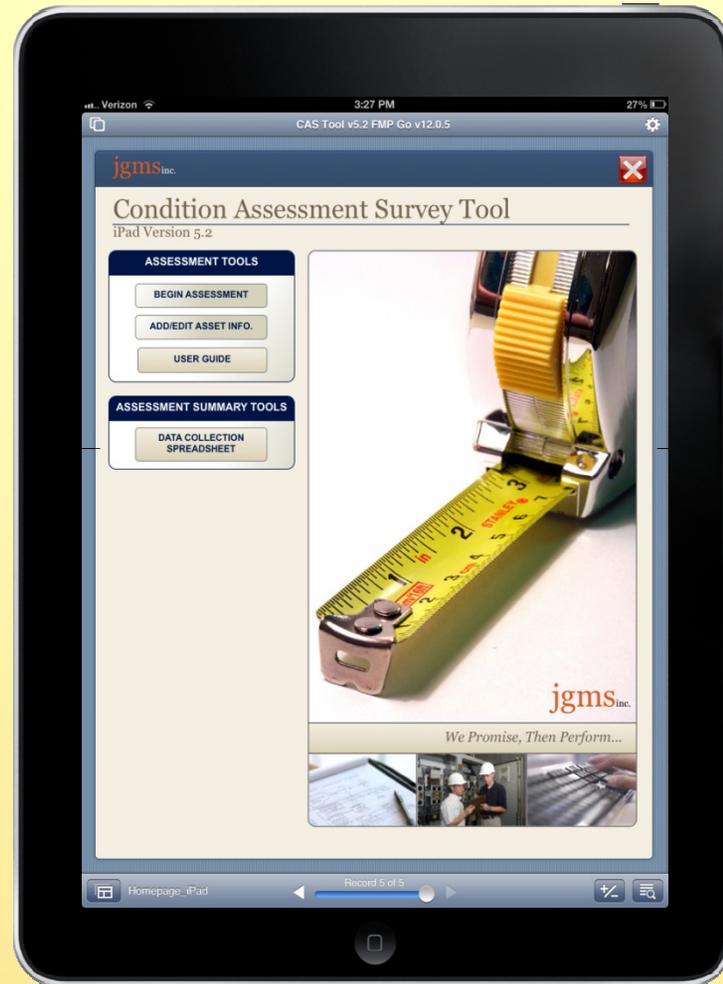
JGMS CAS Assessment Tool

Describe application

Benefits (streamlines process, consistent data,
etc.

Cost–Time benefits/savings

CAS Tool Demo



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CAS Tool Demo Cont.

JGMS CAS Tool v5.1

FIND ASSET RECORD(S) EXPORT RECORDS

RETRIEVE RECORD(S) CAS Takeoffs : General/DI/DM/LS EDIT/ADD ASSET

Entity

PropertyID | Property Name Year Built Year Acquired

1.1 ; NWTC Data Shed 1.1 1981

Model Building Type Gross Sqft Primary Unit of Measure Primary Qty. No. of Floors

90 1

General Asset Images

Takeoffs - General & DM, DI, LS

Location Assessor

Sub Location Assessment Date

WBS1 WBS2 WBS3 QTY Notes Takeoff/DM, DI, LS Images

1) DI, DM, LS - Location DI Code DI QTY

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Add/Edit Asset Information

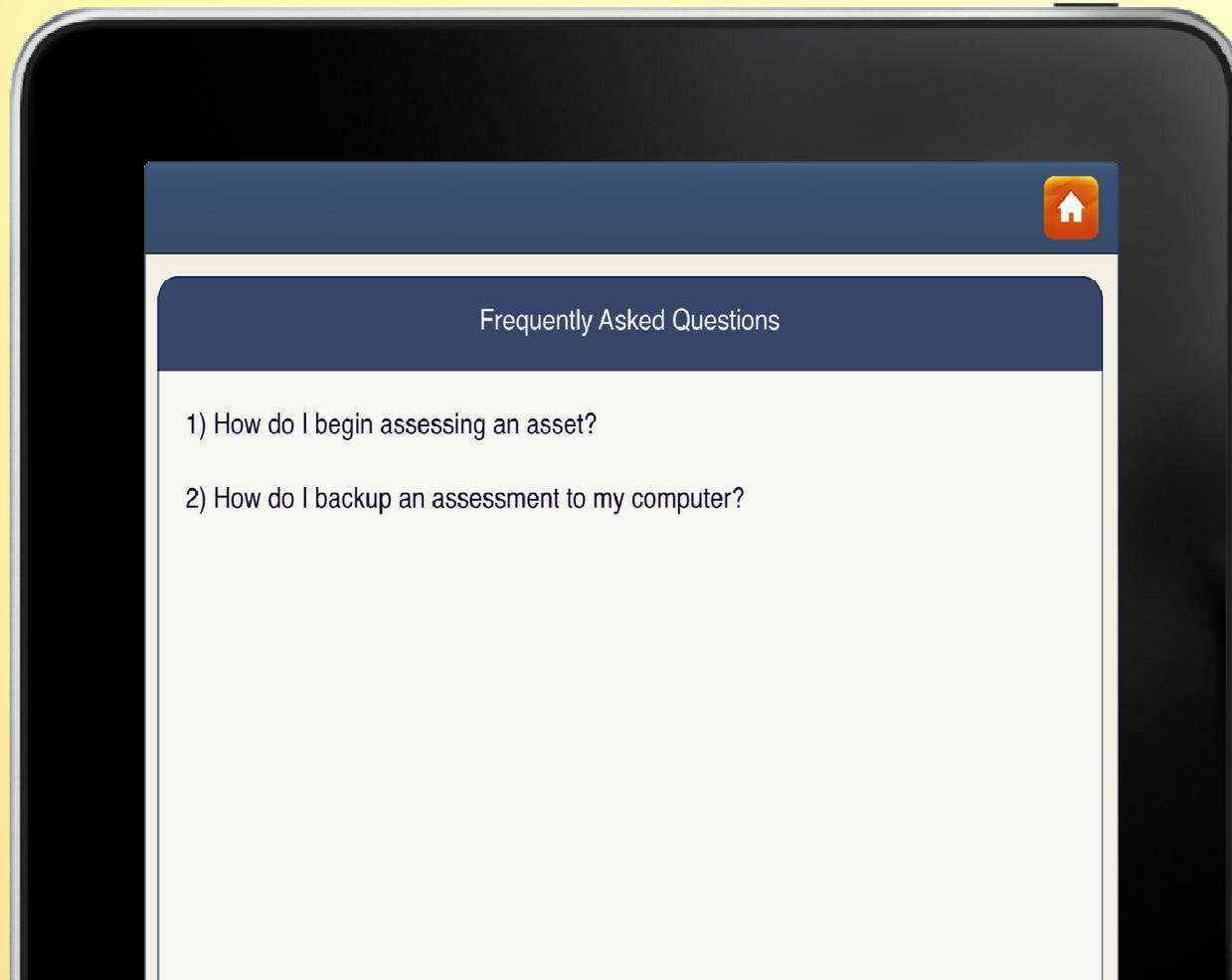
The screenshot displays a mobile application interface for managing asset information. The title bar at the top reads "Add/Edit Asset Information" and includes two buttons: "FIND ASSET RECORD(S)" and "RETRIEVE RECORD(S)", along with a home icon. The main form area contains the following fields:

Area Name	Golden Field Office
Property ID Property Name	1.1 ; NWTC Data Shed 1.1
Property ID	1.1
Property Name	NWTC Data Shed 1.1
Property Type	Building
Gross Sqft	90
No. of Floors	1
Primary Unit of Measure	
Primary Quantity	
Year Acquired	
Year Built	1981
Model Building Type	
Usage Code	661 Communication Systems
RPV	12026.33
RPV Model	
Geographic Cost Factor	
Site Factor	

On the right side of the form, there is a vertical sidebar with four buttons: "CAS Page", "Add New Asset", "Delete Asset", and "Duplicate Asset". At the bottom of the form, there are three buttons: "Previous Asset", "1 of 65", and "Next Asset".

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Built-in Help Functionality



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CAS Tool Benefits

The JGMS CAS Tool:

- Portable handheld all inclusive data capturing/storing device
- Allows the assessment team to provide consistent and accurate assessment data.
- The tool reduces the amount of data capturing instruments required to assess.
- Provides ease of data backup and data transfer/storage.

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CAS Tool Benefits (Cont.)

- Allows the assessor to gather data pertaining to potential new assets.
- Summarizes the assessment(s) in an easy to view format.
- Operates on three platforms (iPad's, Smartphone's, and Laptops).
- Sustainable

CAS Tool Benefits (Cont.)

The JGMS CAS Tool:

- Exports data in excel, XML, PDF format

Asset No.	Discipline	Level 2 Description	Item Description	Location	Sub Location	Deferred/Deficient Code
Thermal Test Facility - 8206						
Thermal Test Facility - 8206	Arch	Floor Construction	There is a crack in the floor near the steel frame exit door. Recommend monitoring the crack to ensure it does not spread.	Interior	High Bay, Near the Steel Frame Exit Door	
Thermal Test Facility - 8206	Plum	Distribution Systems	There is a potential water leak as evident by insulation swelling. Recommend further investigation to determine if a leak exists and remediating leak if necessary.	Interior	High Bay	DM-Deferred
Thermal Test Facility - 8206	Arch	Floor Finishes	The concrete floor contains minor scuff marks. Recommend refinishing the concrete.	Interior	Mid Bay	DM-Deferred
Thermal Test Facility - 8206	Arch	Floor Finishes	The seal on the concrete is beginning to wear. Recommend resealing the concrete floor.	Interior	Mid Bay	DM-Deferred
Thermal Test Facility - 8206	Arch	Partitions	The 6-in. wall base is missing or damaged in several places. Recommend installing new wall base in the areas where missing or repairing the damaged wall base areas.	Interior	Mid Bay	DM-Deferred
Thermal Test Facility - 8206	Arch	Partitions	There is structural cracking in the area near the drinking fountains. Recommend monitoring the crack.	Interior	Near the Drinking Fountains	
Thermal Test Facility - 8206	Arch	Partitions	There are minor scuffs and holes throughout the Interior-Mid Bay area. Recommend repainting the scuffed areas and applying drywall and repainting the holes where needed.	Interior	Mid Bay	DM-Deferred

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Database Crosswalk

Required Elements	CAS Tool	CAIS	FIMS
Area	✓	✓	✓
Asset ID	✓	✓	✓
Property Name	✓	✓	✓
Deferred Maintenance	✓	✓	✓
ASTM Uniformat II	✓	✓	✓
Unit of Measure	✓	✓	✓
Model Type	✓	✓	✓
RPV Model	✓	✓	✓
Usage Code	✓	✓	✓
Year Built	✓	✓	✓
Assessor/Inspector ID	✓	✓	
Description	✓	✓	✓
IU/IIU's	✓	✓	

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Tool Savings

- Reduces the CAS process by 15%–20%

Level of effort (data entry, field assessment/post assessment time).

CAS Tool Benefits (Cont.)

FIMS Requirements

- Area
- Asset or Property ID
- Property Name
- Deferred Maintenance
- ASTM Uniformat WBSII
- Gross SF
- Model Type
- RPV Model
- Usage Code
- Year Built

CAIS Requirements

- Area
- Asset or Property ID
- Property Name
- Deferred Maintenance
- ASTM Uniformat WBSII
- Gross SF
- Model Type
- RPV Model
- Usage Code
- Year Built
- Uniformat WBSII
- IU, IIU
- Inspector ID

CAS Tool Capabilities

- Area
- Asset or Property ID
- Property Name
- Deferred Maintenance
- ASTM Uniformat WBSII
- Gross SF
- Model Type
- RPV Model
- Usage Code
- Year Built
- Assessor
- General Takeoff
Location, Quantity,
Description
- Deferred Maintenance
Location, Quantity,
Description

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