



Working for Municipalities



Municipal DataWorks

Defining the Standard for Asset Management

Asset Management, PSAB and GIS

April 18, 2007 – URISA B.C.

Joe Tiernay, Executive Director, OGRA

Steve Desrocher, ASI Technologies Inc.

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Visit www.ogra.org/mdw



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OGRA Background

- **OGRA represents infrastructure interests of Ontario municipalities**
- **Established 1894**
- **Primary link is to the Ministry of Transportation**
- **Board is both technical staff and political representatives**
- **Training, Advocacy and Member Services**

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MDW and OGRA

- **Initiated by OGRA – a couple of years ago**
- **An advocacy tool**
- **Basic AM tools for members**
- **Standards based repository**
- **Embraces private sector participation – over 30 companies engaged to date**

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AM and MDW Background

- **Asset management is a very broad subject**
- **“Series of repeatable processes”**
- **Data is a key requirement!**
- **Standardized approach to data collection and management**
- **The solution to our asset management needs is...it begins with data**



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Minister's Comments

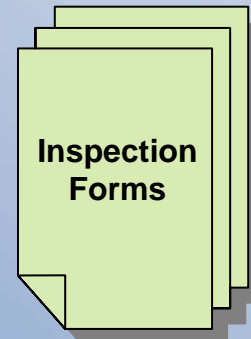
- In her speech in plenary session at the Combined Conference in February 2007, Minister Cansfield said this about Municipal DataWorks:
- *“The Municipal DataWorks database is a fantastic asset management tool that helps municipalities plan for future infrastructure needs” and ... “this ministry recently committed additional funding to enhance the existing road and bridge database and to create a new transit asset inventory in Municipal DataWorks.”*



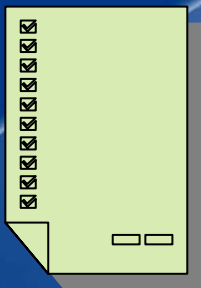
PSAB 3150



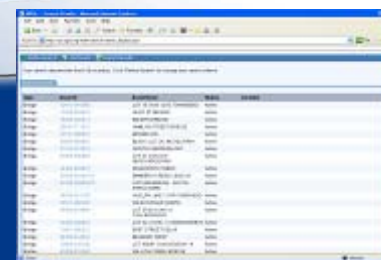
Planning



Inspection
Forms



Work
Management



Data Warehouse



GIS

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Data Silos

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MDW Interface

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The screenshot displays the MDW web interface in a browser window. The title bar reads "MDW -- Asset -- Road Section:Aird St". The browser address bar shows the URL: http://www.ogra.org/mdw/asset/asset.aspx?asset_oid=63170111-c6ad-4a1b-a606-290cb48791c7. The page header includes the "Municipal DataWorks" logo and navigation tabs for SEARCH, INVENTORY, CAPITAL INVESTMENT PLAN, ASSET VALUATION, BUDGETS, REPORTS, and ADMIN. The user is identified as "User: Al Kostiuik".

The main content area is divided into two panels. The left panel shows a tree view for "Aird St" with categories: Condition and Performance (CAP), Life Cycle Event (LCE), Construction, Inspection, Rehabilitation, Relationships, Business Groups, Security Groups, and Related Applications. The right panel displays detailed asset information:

- Location:** Block : On Broadview Ave From Kendalwood Rd To Powell Rd; Block : On Aird St From Limestone Cres To Bassett Blvd
- Identification:** Asset Type : Road Section; Asset ID : 004112; Asset Name : Aird St; Asset Status : Active; Asset Material : High Class Bituminous; GIS ID : ; Area : DEMO TOWN
- Dimension:** Desired Right of Way Width : 20 m; Right of Way Width : 20 m; Surface Width : 8.5 m
- Surroundings:** Drainage Condition : Combination Sewer; Drainage Condition : Storm Sewer; Roadside Environment : Urban; Terrain and Soil Type : Non-Rocky, Flat
- Road Section:** Average Operating Speed : 50; Boundary Road : Not a Boundary Road; Existing Road Class : Local Residential; Load Restrictions : Spring Restriction, Type "A" (Half Load); Maintenance Class : 4; Number of Lanes : 2

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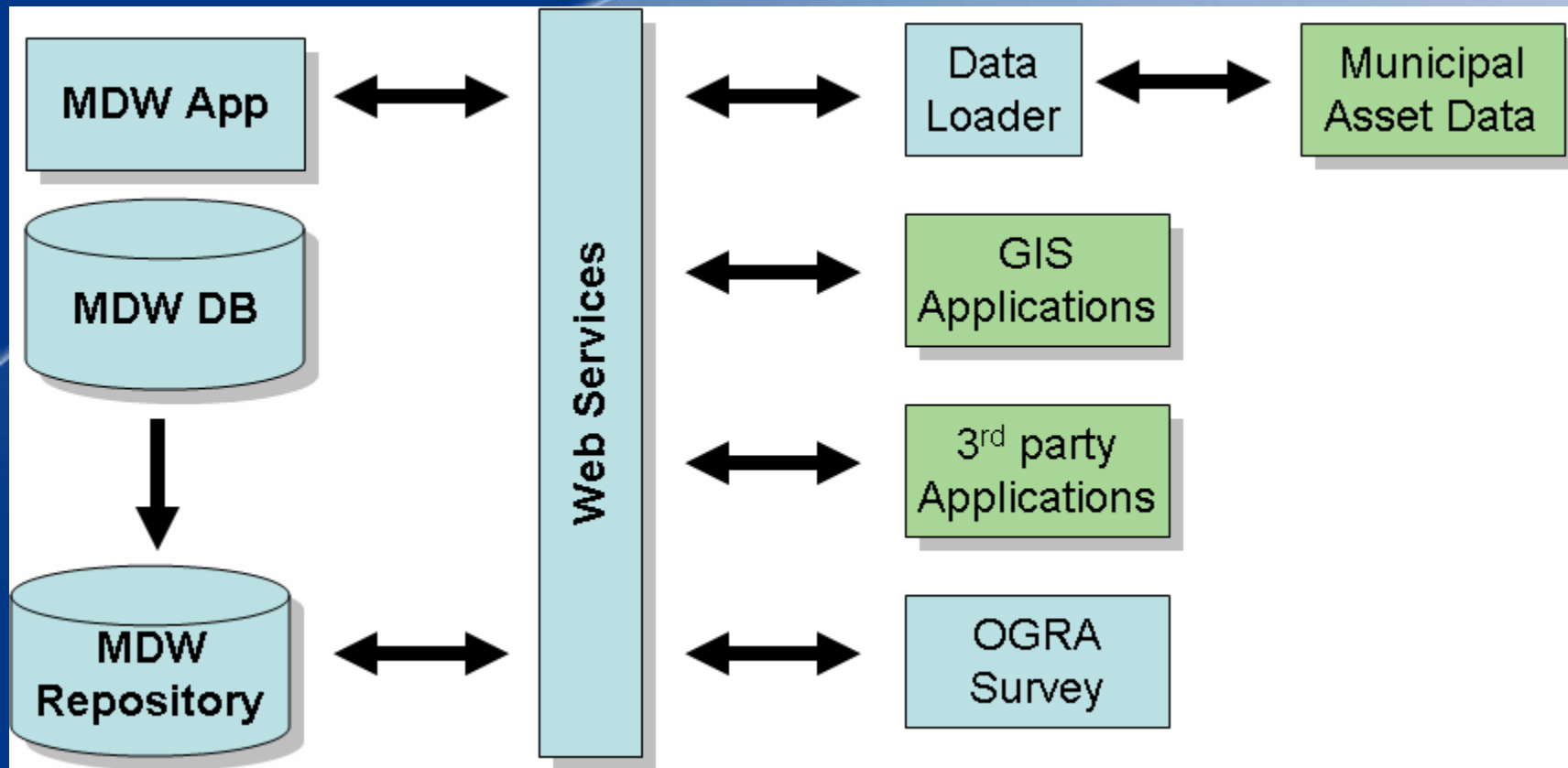
NRC Research

- “Developing industry-wide standard integrated data models for infrastructure systems is another critical area for future research. The data models supported by existing software are mostly proprietary, which impedes the ability of the software systems to interoperate and share asset data”
- Source: NRCC-45610, January 2006



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MDW Schematic



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Current Modules

- **Asset Data Repository (roads, bridges, water and sewer, transit, buildings etc.)**
- **Asset condition**
- **Asset Valuation (PSAB 3150)**
- **Web Services (data in and data out)**
- **Capital Investment Plan (CIP)**
- **Data conversion tools**

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Future Modules & Enhancements

- **Capital Investment Plan (Phase II)**
- **Business Intelligence Tools**
- **New Asset Types (based on demand)**
- **Expanded Web Services**
 - Continued expansion of these services
- **More Third Party Integration (Software)**

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Spatial Tools (GIS)

- **A critical area for the MDW service!**
- **No need to re-invent the wheel**
- **Short term goal – use web services to offer up integration with GIS software**
 - Autodesk
 - ESRI
 - Mapfusion
 - Google Maps
- **Next step – spatially enable MDW**

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How MDW “Connects”

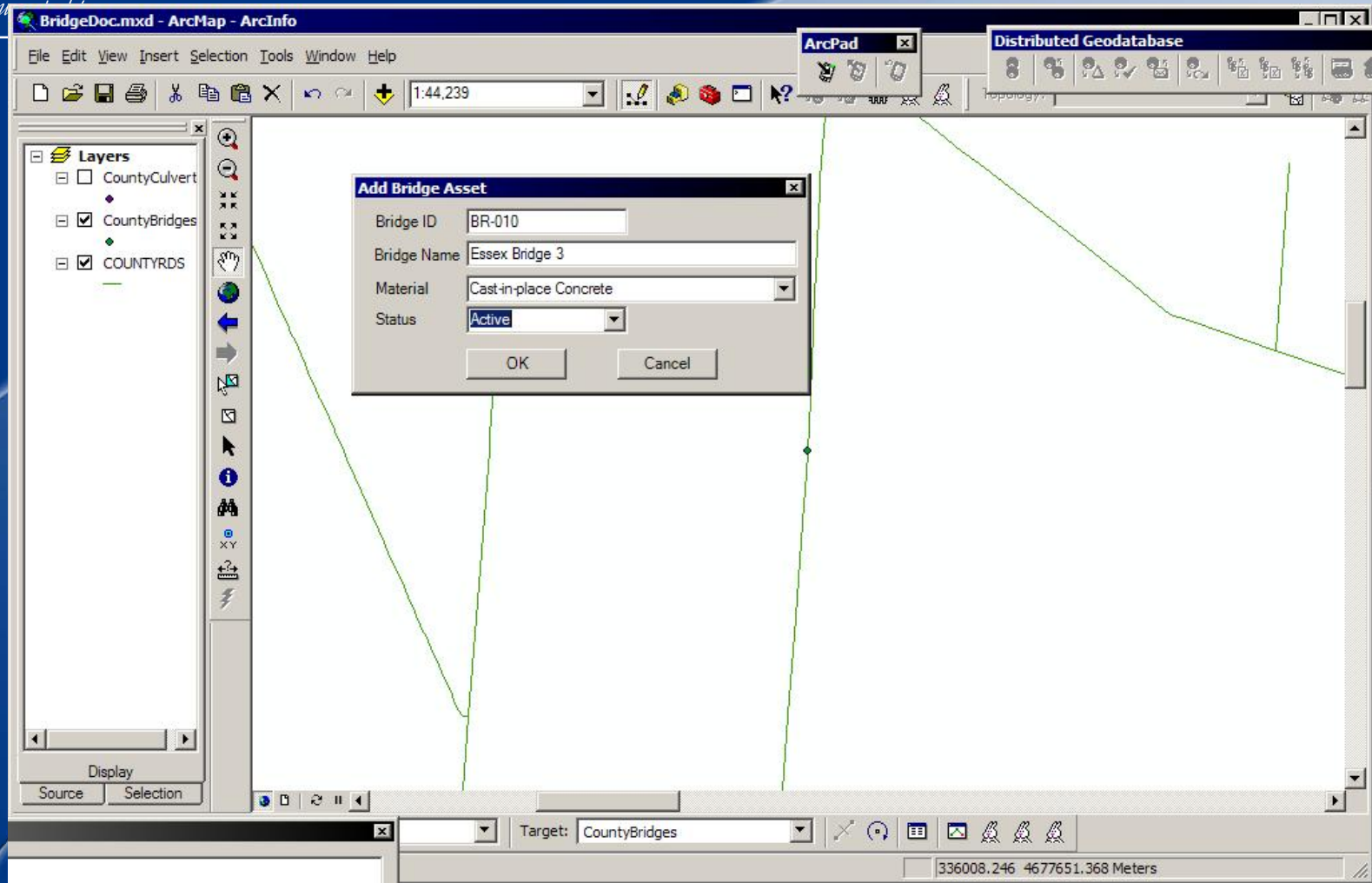
- **MDW uses “web services” to interact with third-party applications (software)**
- **Consultants can use web services to access existing data or upload new data**
- **Software providers can “consume” MDW as part of their solution**
- **MDW puts maximum leverage in the hands of the municipal infrastructure owners**

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Example: ARC GIS and MDW

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Global CADD/MDW Integration

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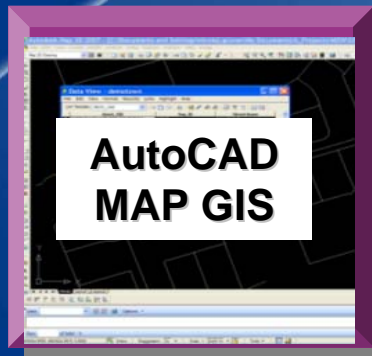
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Integration

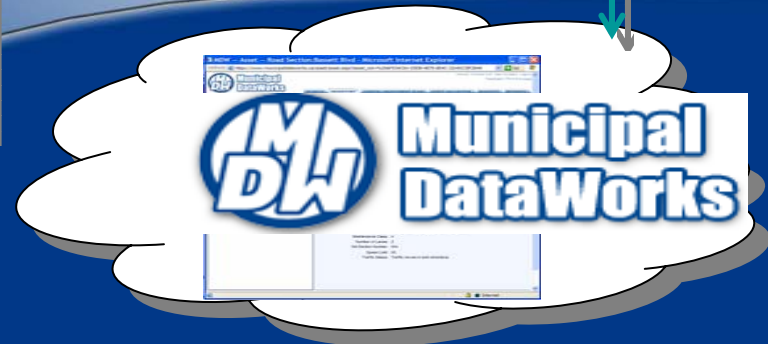
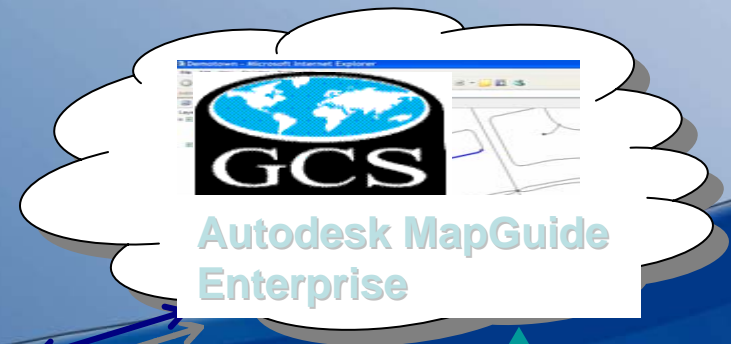
Create

Manage

Share



**Centralized
Data**



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AV Start-up

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MDW -- Asset Valuation -- Reporting Years - Windows Internet Explorer

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SEARCH INVENTORY CAPITAL INVESTMENT PLAN **ASSET VALUATION** BUDGETS REPORTS ADMIN

User: Julia Lu

Asset Valuation

Setup

- Cost Index

Reporting Years

Define Categories

- Generate Categories
- Categories
- Outliers

Categories

Asset Valuation

- Outliers
- Calculate





























Reports

- Capital Asset Depreciation

Reporting Years

Select an existing reporting year or add a reporting year.

Reporting Years

	Name	Creation Date	Date Last Modified	Area	Locked
select   	2000 Report for Test Calculation -- June	4-10-2007	4-11-2007	City of Toronto	
select   	2001 Report for Test Calculation -- June	4-11-2007	4-11-2007	City of Toronto	
select   	2004 Report for Test Calculation -- June	4-3-2007	4-10-2007	City of Toronto	
select   	2005 Report for Test Calculation -- June	4-9-2007	4-9-2007	City of Toronto	
select   	2006 Report for Test Calculation -- June	4-9-2007	4-9-2007	City of Toronto	
select   	St Clair Sewers Only	4-10-2007	4-11-2007	Township of St. Clair	
select   	St Clair Roads Only	4-10-2007	4-11-2007	Township of St. Clair	

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User: Julia Lu

Asset Valuation

Setup

- Cost Index

Reporting Years

Define Categories

- Generate Categories
- Categories
- Outliers

Categories

Asset Valuation

- Outliers
- Calculate

Reports

- Capital Asset Depreciation

Categories

TODO

Reporting Year : St Clair Roads Only
Area : Township of St. Clair

[-] Road Section

- Road Section: Asset Material=High Class Bituminous, Classification=Arterial (Nu
- Road Section: Asset Material=High Class Bituminous, Classification=Collector (N
- Road Section: Asset Material=High Class Bituminous, Classification=Local (Num
- Road Section: Asset Material=Low Class Bituminous, Classification=Arterial (Nu
- Road Section: Asset Material=Low Class Bituminous, Classification=Collector (N
- Road Section: Asset Material=Low Class Bituminous, Classification=Local (Num

Category ID : 3

Category Name : Road Section: Asset Material=High Class Bituminous, Classification=Local

Useful Life : *

Amortization Method : *

Valuation Method : *

Materiality Limit : *

Is Pooled? :



AV – Final Numbers

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MDW -- Asset Valuation -- Capital Asset Depreciation Report - Windows Internet Explorer

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SEARCH INVENTORY CAPITAL INVESTMENT PLAN **ASSET VALUATION** BUDGETS REPORTS ADMIN

User: Julia Lu

Asset Valuation

- Setup
 - Cost Index
- Reporting Years
- Define Categories
 - Generate Categories
 - Categories
 - Outliers
- Categories
- Asset Valuation
 - Outliers
 - Calculate
- Reports
 - Capital Asset Depreciation

Capital Asset Depreciation

Reporting Year : St Clair Roads Only
Area : Township of St. Clair

Export

Capital Asset Depreciation

Period : January 1 ---- December 31, 2007

Asset Type	Beginning Value	Depreciation Applied	Ending Value
Road Section	\$99,299,890.00	\$13,057,943.54	\$86,241,946.46
Total	\$99,299,890.00	\$13,057,943.54	\$86,241,946.46

Previous

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MDW – Location Screen

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MDW -- - Windows Internet Explorer

MDW --

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SEARCH INVENTORY CAPITAL INVESTMENT PLAN ASSET VALUATION BUDGETS REPORTS ADMIN

User: Julia Lu

11th Street

- Condition and Performance (CAP)
- Life Cycle Event (LCE)
 - Inspection
 - Relationships
 - Attachments
- Business Groups
- Security Groups
- Related Applications

Location

Select Location Type : Block

Select Municipality : Block

Select Street : 11th Street

Select From Street : Prince Street

Select To Street : George Street

Save Cancel

Municipal DataWorks is a membership service of the Ontario Good Roads Association.
The start-up funding for Municipal DataWorks has been provided by the Ontario Ministry of Transportation.

Powered By: Municipal WORKBENCH

Done Local intranet 100%

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Role of ASP's

- **Provide software and services as always**
- **Advise on data requirements to complete certain objectives (PSAB 3150)**
- **Manage and maintain data as required**
- **Generate capital plans**
- **Provide integration with MDW where required**
- **For clarity, an ASP works for you the municipality....MDW is simply another tool for you and them**

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Getting Involved!

- **MDW is available to all Municipalities in Canada through OGRA and a variety of Authorized Service Providers**
- **Private sector organizations can join the MDW team**
- **Consultants are leveraging their services through the MDW program**
- **MDW is an innovative, cost effective, standards based tool**

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Defining the Standard for Asset Management



Questions?

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