Operational Support through ERP Integrations

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Where is Chatham-Kent?
Chatham-Kent: A Community of Communities

- Ridge Town
- Wheatley
- All former Townships
- Blenheim
- Dresden
- Chatham
- Tilbury
- Wallaceburg
- Wheatley
- Blenheim
- Ridgeway

+ ALL FORMER TOWNSHIP PS
Chatham-Kent: Key Statistics

- Total Population of 104,000
- 2,500 square km (965 sq mi)
- 45,000 Address Points
- 53,000 Parcels
- 3,400 km of Roads (2112 miles)
- 4,000 km Municipal Drains (2485 miles)
GIS in Chatham-Kent

- Partnership of Municipal, Hydro and Water/Wastewater utilities
- Support a workforce of over 2000 employees (includes Police, Fire, Utilities, Long Term Care Facilities, PUC…)
- Esri users since 2001
- 4 Full Time GIS Staff in IT Department.
- 7 Subject Matter Experts with GIS Competency in Departments (Planning, Engineering, PUC, Hydro)
Consolidation of Information

• Non-standard formats
• Not organized
• Access was difficult
• Records Unavailable
• Maintenance was backlogged
Original Objective of GIS in Chatham-Kent

- Provide the same standardized information to field workers as is available to our office staff
GIS Implementation focused on Records Management
In 2012, Chatham-Kent was at a turning point!
Our Systems were Aging and Unintegrated

Duplicate Effort...Poor Information/Data Exchange

Satellite Systems (Access, Excel)
Where we Wanted to Be

Standard Processes.........................Industry Best Practices

Shared Knowledge ............Continuous Improvement

“Survival through Simplification, Stability and Sustainability”
Project Delta Implementation Team

- JD Edwards
  - Human Resources and Payroll
  - Capital Asset Management
  - Financial Management
  - Purchasing and Inventory Management
- RAC Software Inc. Financial Managers Workbench
  - Budgeting Software
- DevNet Property Tax
- SharePoint Document Management
- Class Point of Sale Solution
Project Delta Implementation Team

- CityView
  - Business Licensing
  - Cemetery Management
  - Building Permitting
  - Planning Services
  - Service Requests
  - Animal Licensing
  - By-Law Enforcement
  - Public Works Permits (moving, curb cutting, etc.)
Asset Management, Work Order Management and Inventory Management have Fundamentally Changed how GIS is leveraged in Chatham-Kent
Field Asset Management is driving data maintenance in the GIS System. GIS is no longer simply design, accounting and recording….it is an essential infrastructure supporting daily operations.
Supporting Operations is creating new Opportunities

- New datasets being added to GIS in response to operational needs
- Improved quality of data as more people are actively looking at the information
- Field Change Requests to be turned around quickly to support daily Work Order requests
- Push to ensure data is spatially accurate to support GPS in the field
- Changing edit procedures to support asset lifecycle
Shift in Focus

Records Management

Operational Support

Office Workforce

Mobile Workforce
Shift in Scope

Line of Business Tool

Base Corporate Service
Making the Transition

- Incorporating dashboards of information for users – allowing a “real time” look at their business data
- Increase accuracy of the data provided – to transform our infrastructure data from schematic to a WYSIWYG environment
- Collect additional data to help complete our “infrastructure snapshot”
- Incorporate GIS in our work order “work flow” to help close the gap on updates to our data
Making the Transition

- Use of Esri technology is allowing us to move the workforce outside – ArcGIS Mobile, ArcGIS.com and ArcPad
- Currently investigating a standardized tablet solution – to allow for easier cross training/troubleshooting
- Other solutions to incorporate GIS into our workflows – for Public Works, Inspectors and other onsite crew members
Making the Transition

• Our previous model allowed us to store records and make them available to the business units who provided them

• We look to provide any and all information to the variety of business units that need it
  - Only some business units are the caretakers, but many business units are consumers of the information
JD Edwards Integration: GIS Asset Selector
GIS Asset Selector

- FindTask used via API for asset number searching – used for quickly locating an asset when asset number is known.
- Passes unique asset ID to JD Edwards work order creation program via parameterized URL.
- Customization required on JD Edwards side to convert incoming asset number (unit number in JDE) to asset number from incoming query string parameter.
- Nightly SQL running to add/remove/modify assets in JD Edwards from GIS database.
JD Edwards Enterprise One

Please Select a Map Theme:

- Everything
- Road Maintenance
- Water/Wastewater

What's New?

Jun 23, 2014
- Added "Sampling Stations" to mapping interface

Apr 7, 2014
- Changed address search to display township while searching to assist with rural locations
- Search box width has been increased to accommodate this change
- Moved "Report Missing" button to top-right area

Mar 21, 2014
- Added ability to report missing assets

Feb 19, 2014
Selecting ‘Everything’ Layer
Map Interface
Address Search

Enter your address search followed by the enter key.
Type the address number and street name, then use the auto-complete dropdown to pick between similar addresses.

You can narrow your search by adding the community name to the end of your street separated by a comma. Eg: "315 King St, Chatham"

Selected Asset:
(none)

Available Asset:
(none)
Address Search
Asset Selection
Looking for Storm Data
Picking from a list of Potential Assets
Creating a Work Order
JD Edwards Generated Work Order
GIS Asset Selector: Technical Specifications

- Esri ArcGIS API version 3.7
- JavaScript frameworks: jQuery, jQuery UI, Dojo
- Esri “topo” base map for initial Municipality-wide zoom level, then switches to Chatham-Kent’s base map when zoomed to the community level
- Layer “sets” specified in configuration file based on layer service IDs
- Additional properties configurable to display additional attributes for specific layers (e.g.: Sign name, street name, etc.)
- Geocoder services used for address and intersection searches
Next Steps

- Develop Mobile device interfaces for Asset Selector and Work Order generation
- Modify Work Order process to include requests to update data based on field work
- Create Management map views to illustrate daily, weekly, monthly work order activity
- Integrate reporting functionality with SharePoint
- ....and much more
Thank You