



Emergency Management Solutions in ArcGIS

Presented by: Region of Durham

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Organization Overview

- **Durham Emergency Management Office (DEMO)**
 - Responsible for The Regional Municipality of Durham's emergency management program. The program keeps residents safe. It improves Durham's ability to recover from emergencies.

Plans

Response

Training

Exercises

Public education

Project Description

- **GIS team is a part of Regional Emergency Operations Centre**
 - Ongoing support of Emergency Management Office is a priority
- **2 Projects**
 - Interactive Maps
 - 'Information Management'
- **Goals**
 - Provide alternative to expensive, out of the box emergency management solutions (not replacement)
 - Organize and safeguard key emergency information
 - Enable better situational awareness

Requirements

User-friendly for
'just in time'
training

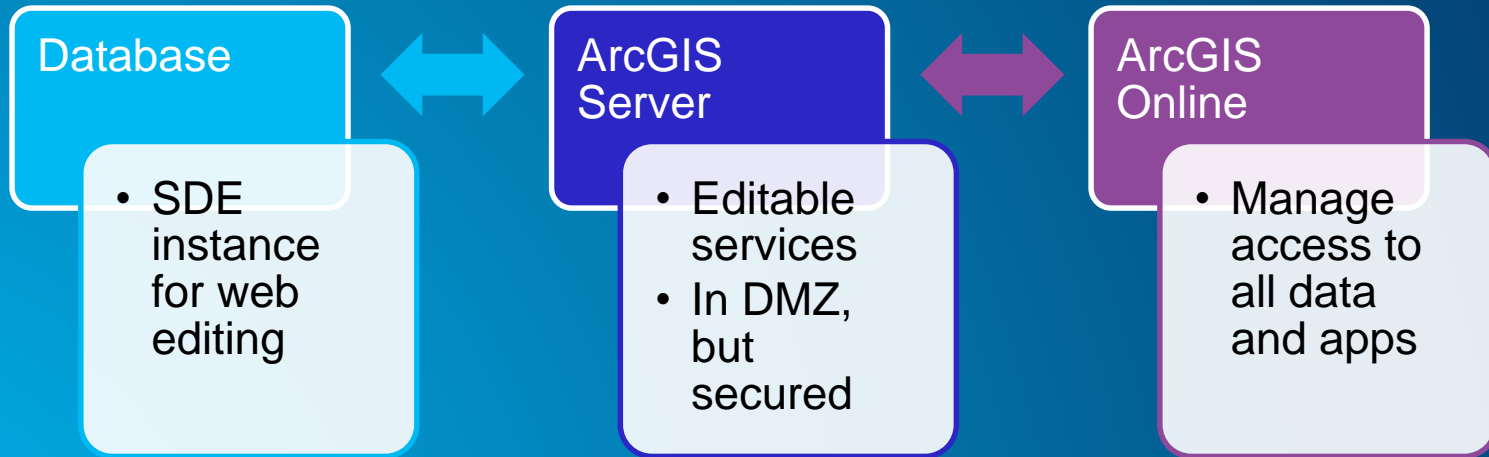
Distributed
Mapping

Situational
Awareness

Record Keeping
(Evidence)

Managing Tasks
and Alerts

System Environment



Levels of Data

Map Control Events

- Incident Area, Point
- Evacuation Centres, Reception Centres, Command Post

Log Events

- Master and Section Logs
- Potential to be Spatial Events

Task Management

- Flag for Follow-up in Log, currently evaluating better methods

Map Demonstration

REOC Viewer Quick Guide Detailed Guide

Find address or place

Legend

- Reception Centre (Nuclear)
- Evacuation Centre
- Command Post
- Other

Edit Data - Incident Point

- High level incident
- Low level incident
- Medium level incident

Edit Data - Incident Area

- High level incident
- Low level incident
- Medium level incident

***** Regional Data *****

- Emergency Services
 - EMS
 - Fire
 - Police
- Evacuation Centres
 - Evacuation Centre
- Municipal Emergency Operation Centres
 - Municipality
- Nuclear Plants Zones (Buffer)
 - 3 KM
 - 10 KM
 - 20 KM
- Nuclear Response Sectors

Incident Weather Child Care Centres (3) Community Services (0) Schools (3)

1 Sir John A Macdonald Public School
777 Balastron Av
905-839-1159

2 Bayview Heights Public School
1400 Gardiner Av
905-839-1146

3 Durham Alternative Secondary School - Pickering Campus
1400 Bayly St, Unit 21
905-839-2913

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Log Demonstration

REOC Dashboard Region of Durham - Emergency Management

REOC Log Filters

Filter by Information vs Follow-Up
All Information Types

Filter by IMS Section

- All Sections
- Command
- Logistics
- Operations

Filter by Subsection

All IT Liason Sserv

Refine by Date

6/20/2018 12:00 AM

9/19/2018

Selected Log

- 9:40 Command Control to advise no naloxin in command centre
[Edit Details](#)
- 6/20/2018, 10:02 AM - **Operations Sserv** - Informational
- 9:40 - Tamara 911 Called
[Edit Details](#)
- 6/20/2018, 10:02 AM - **Operations Sserv** - Informational
- St John's Ambulance requested to Gym
[Edit Details](#)
- 6/20/2018, 10:01 AM - **Command Liason** - Informational
- REOC is open.
[Edit Details](#)
- 6/20/2018, 9:59 AM - **Operations Sserv** - FollowUp
- 9:38 - individual down medical emergency 911 Naloxin Needed Contact St John's Ambulance
[Edit Details](#)
- 6/20/2018, 9:58 AM - **Operations Sserv** - Informational
- 9:37 - runner needed at vehicle status
[Edit Details](#)
- 6/20/2018, 9:58 AM - **Operations Sserv** - Informational
- 9:37 - Runner needed at Building Registration
[Edit Details](#)
- 6/20/2018, 9:55 AM - **Operations Sserv** - FollowUp

Details

Priority Level: High

Information Type: Requires Follow-up

IMS Section: Operations

Section Group: Sserv

Details: 9:38 - individual down medical emergency 911 Naloxin Needed Contact St John's Ambulance

Date and Time Received in REOC: 6/20/2018, 9:59 AM

Actions Taken:

Date and Time Closed: 6/20/2018, 9:59 AM

Date/Time Stamp: 6/20/2018, 9:59 AM

Last update: a few seconds ago

Lesson Learned

- **What would you do differently?**
 - **Accelerate development cycles (instead of waiting for Exercises)**
 - **Study the templates and their life cycle (Esri's plans)**
 - **Build more confidence in the approach with client early on**
- **Positive recommendations for others?**
 - **Focus on data quality, to aid records and analysis (good structure)**
 - **Don't over-engineer the dashboard and/or web map (keep simple)**
 - **Get to know your Emergency Operations Centre (Incident Management System – take training available)**

Future Plans

- **What are the next steps for your project?**
 - **Sharing data beyond our walls (via Communications Office)**
 - **Helping local municipalities develop their programs**
 - **Complete the training cycles**
 - **Better task management and alerting**
 - **Unstructured data input (data lake)**
- **How do you think your organization will leverage this achievement?**
 - **Primary: better emergency management**
 - **Secondary: more awareness of the power and flexibility of ArcGIS**

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