



# NORTH CAROLINA STATE AND LOCAL GOVERNMENT METADATA PROFILE

Steve Averett, GISP

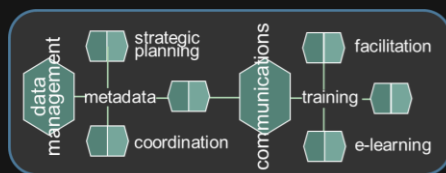
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*Data, data, everywhere  
And all the drives did shrink*

*Data, data, everywhere  
But none of it in sync*



GeoMaxim

Proposal for GICC Adoption  
November 20, 2014

- 1994: FGDC adopts CSDGM as the federal standard

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- 1998: NC adopts CSDGM as the state standard

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- 2003: ISO publishes first 191\*\* spatial metadata standards

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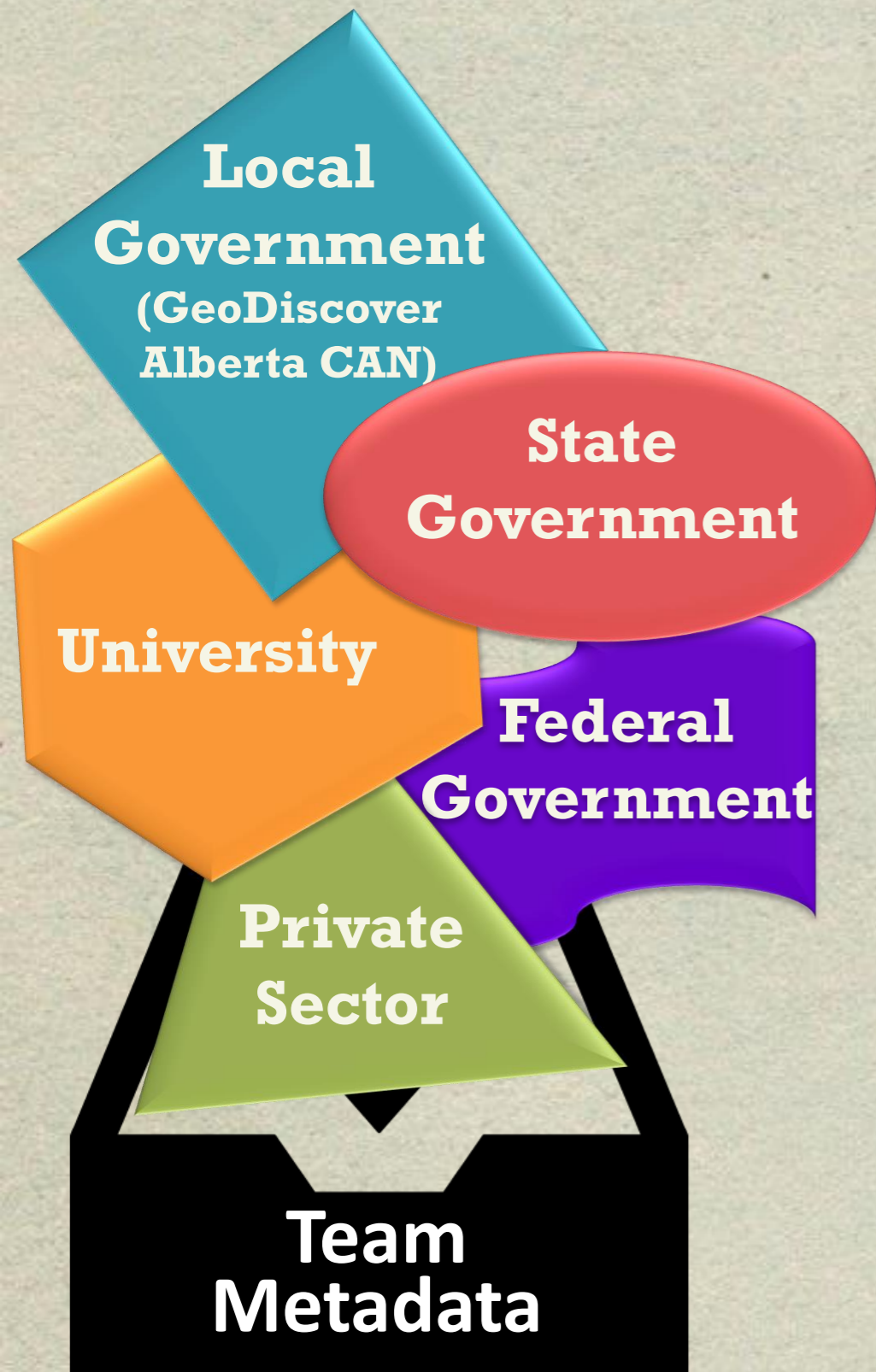
- 2010: FGDC adopts ISO 191\*\* as federal standard

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- 2012: SMAC forms an ad hoc committee to review NC metadata standards

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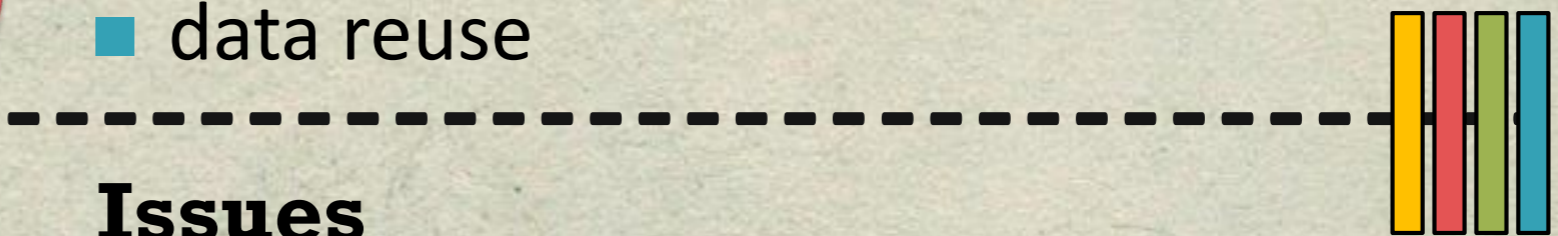
- 2014: ad hoc Metadata Committee recommends adoption of a profile compliant with ISO 191\*\*



## Objective

Carve down the standard into essential elements that support:

- standards compliance
- data discovery
- data reuse



## Issues

- which standard to use?
- how much information/education to include to support implementation?
- how to format a profile?

# A GOOD METADATA RECORD

IS HARD

TO FIND

(and make)

## REQUIRES

- Time and effort
- Learning new standards and tools
- Re\$ources
- Accountability

**As a result:** many organizations produce minimal, if any, metadata

# The Problem

ISO Required


ISO Essential


CSDGM  
Required



### Process:

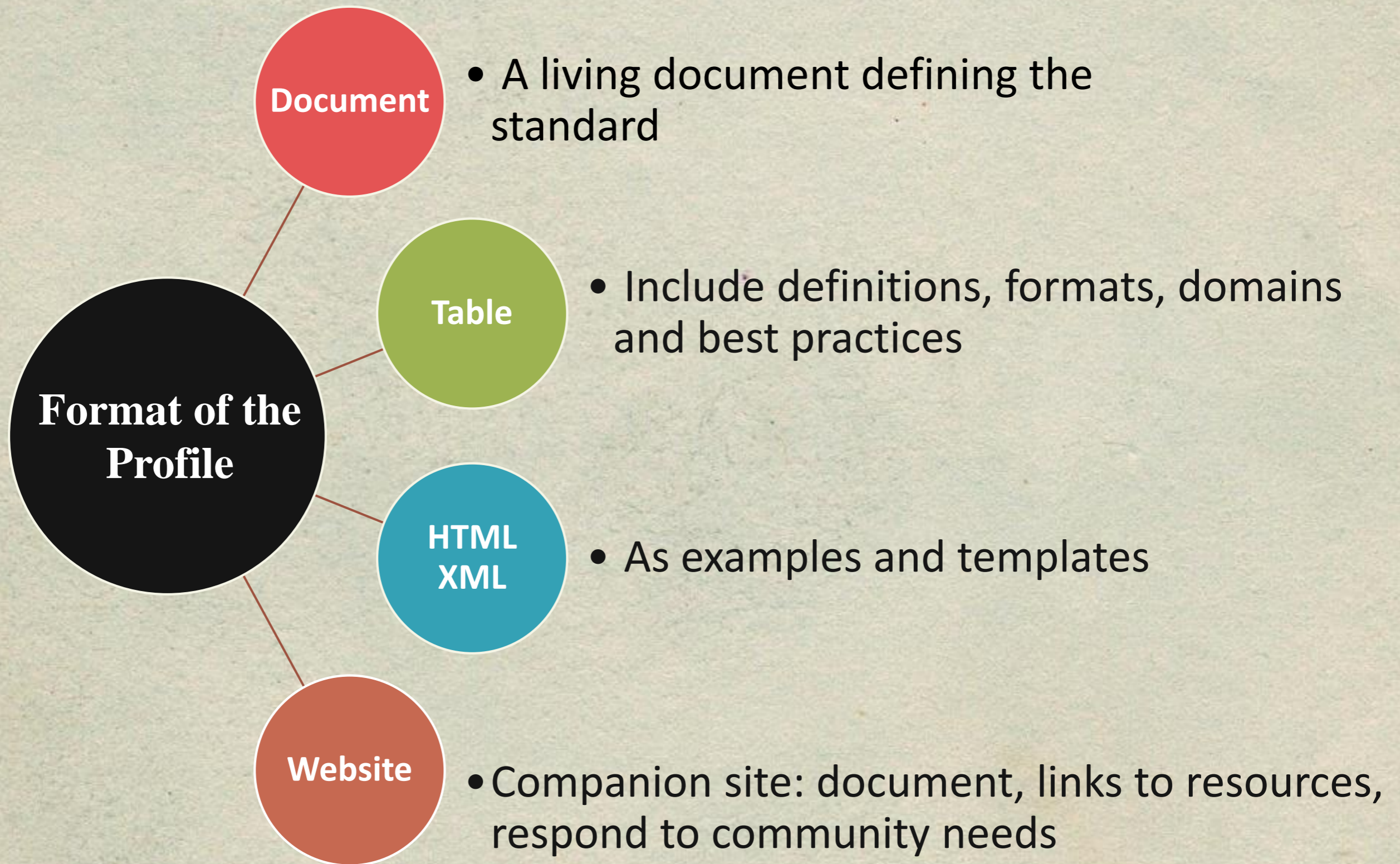
1. Include all ISO & CSDGM mandatory elements
2. Add ISO elements *essential* to meet operational requirements
3. Identify non-mandatory elements:

 CSDGM-only required

 ISO elements

- 19115-1 specific elements
- don't apply to all types of data

# The Solution



# North Carolina State and Local Government Metadata Profile for Geospatial Data and Services

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## Contents

Introduction & Acknowledgments  
Value of Compliant Metadata

**Why?**

Geospatial Metadata Standards Used to Develop the Profile  
Metadata Implementation

**How?**

Table 1 - Metadata for Geospatial Data  
Table 2 - Metadata for Geospatial Services  
Appendix 1. Code Lists  
Appendix 2. Standard Publications and Related Documents

**What?**

## Table 1 - Metadata for Geospatial Data

### Legend:

- NC Profile and ISO required
- Optional and/or CSDGM required

Example

Best Practice

Definition

Element	Domain	NC Best Practice
Title	Free text	<ul style="list-style-type: none"> <li>Provide a descriptive, unique, name to convey the nature of the data. At a minimum, address: what, where and when.</li> <li>Avoid acronyms and abbreviations that are not commonly understood though a filename or other identifying reference can be included <i>in addition to</i> the descriptive content.</li> </ul> <p><b>Example:</b> <i>Environmental Sensitivity, and Wetlands, Geographic, Wilmin Carolina Department of Environment and Natural Resources (NCDENR) 2001 [esi scrub-shrub wetland NCDENR 2001]</i></p>
Purpose	Free text	<ul style="list-style-type: none"> <li>Explain why the data was created. This element can provide critical context for data that was created for a specific use and may not be appropriate for other, or more general, use</li> </ul>
Responsible Party Role	Role Code = 'custodian' or 'pointOfContact'	<ul style="list-style-type: none"> <li>ISO metadata only – no need to specify if using CSDGM</li> <li>Used to designate the specific role of each <i>Responsible Party</i> listed</li> <li>A 'custodian' or 'pointOfContact' is required</li> </ul>

CSDGM required

ISO Qualifier

Domain





## Dataset Metadata

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1. Title
  2. Publication Date
  3. Responsible Party
  4. Online Linkage
  5. Abstract
  6. Status
  7. Maintenance / Update Frequency
  8. Theme Keywords
  9. Topic Category
  10. Geographic Extent (N,S, W, E)
  11. Temporal Extent of Content
  12. Entity/Attribute Description
  13. Process Description
  14. Spatial Reference System / identifier
  15. Metadata Date
  16. Metadata Contact Name
- 



## Services Metadata

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1. Title
2. Publication Date
3. Responsible Party
4. Online Linkage
5. Abstract
6. Theme Keywords
7. Topic Category
8. Geographic Extent (N,S, W, E)
9. Metadata Date
10. Metadata Contact Name
11. Metadata Scope
12. Service Type



Geographic Data Serving A Statewide Community

Metadata

Metadata

A geospatial metadata record is a file of information, usually an XML document, which captures the basic characteristics of digital data such as GIS files, geospatial databases, and imagery. It reports why and how of the resource. It can also be used to document other geospatial resources including data catalogs, mapping applications, and data models.

NC OneMap supports the [Federal Geographic Data Committee's](#) (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM), as approved by the North Carolina [Geographic Information Co](#)

In 2014, the GICC approved another metadata standard based on the FGDC-endorsed ISO 191\*\* (and associated) standards. North Carolina developed a "State and Local Government Metadata standard for those government agencies. The [International Organization for Standardization](#) (ISO) is the world's foremost developer of voluntary international standards. By adopting the ISO series of standards, local governments ensure that their metadata will be published and searched in a consistent manner by agencies, organizations, and individuals throughout the world. Metadata creators are urged to

NC OneMap-supported metadata standards:

- [State and Local Government Metadata Profile \(based on ISO 191\\*\\* suite of standards\)](#)
- [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#)

[State and Local Government Metadata Profile](#)

The North Carolina Geographic Information Coordinating Council ([GICC](#)) has formally adopted the "State and Local Government Metadata Profile", based on the ISO 191\*\* suite of geospatial metadata standards. The International Organization for Standardization (ISO) is the world's foremost developer of voluntary international standards. By adopting the ISO series of standards, state agencies and local governments ensure their metadata will be published and searched in a consistent manner by agencies, organizations, and individuals throughout the world.

[Current version of the State and Local Government Metadata Profile](#)

[ISO Metadata Resources:](#)

The XML metadata **templates** below are application-specific and are based on samples from the applications. They can be imported to their respective applications to provide a starting point for metadata creation. The **examples** below show what profile-compliant metadata can look like.

Software	Template	Example
Esri ArcGIS	XML	XML, HTML
QGIS	XML	XML, HTML
CATMDEdit	XML	XML, HTML

[CSDGM Metadata Templates](#)

[Start with a template.](#) The CSDGM metadata templates below are customized for NC OneMap content providers:

Site Navigation

- Home
- Discover / Get Data
  - Access to Local Geospatial Data
  - NC StreetMap Road Centerlines
  - Standards / Best Practices
- Metadata
  - Business Case for Metadata
- Orthoimagery for North Carolina
  - NC OneMap Blog
  - GIS in NC - Who? What? Where?

Geospatial Portal Website



Click on Logo to visit the Geospatial Portal  
Discover NC's Geospatial Data

Get Data

[NC OneMap Data Explorer](#)

GICC



# The Profile Website

1

- November 2014 – Adoption by NCGICC?

2

- February 2015 – Presentation and promotion at the NC GIS Conference

3

- July 2015 – Presentation at the Esri International User Conference

4

- 2015 & Beyond – Workshops to promote ISO metadata and continuous updates to resources and templates

# What's Next?



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