

# Communicating to End-Users through Classification: Approaches and Tools

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# Approaches to Data Classification

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WHAT IT IS, HOW ITS DONE

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# Data Classification

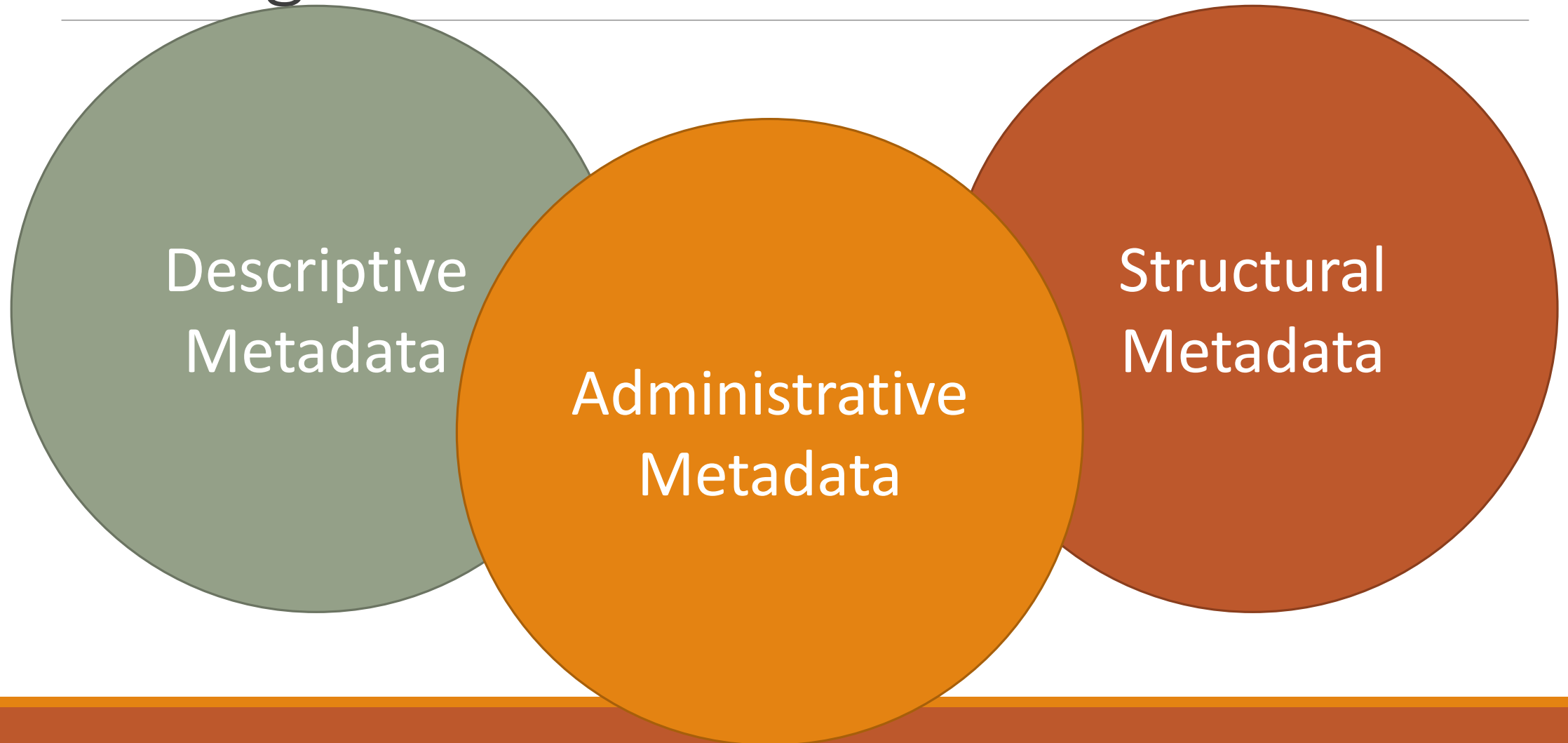
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Process of organizing data categories to apply appropriate security controls to protect the security, confidentiality, business continuity, and retention

Necessary for insuring the legal, fiduciary, and ethical handling of records

# Data Classification as Metadata Management

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Descriptive  
Metadata

Administrative  
Metadata

Structural  
Metadata

# Properties of Metadata Schema

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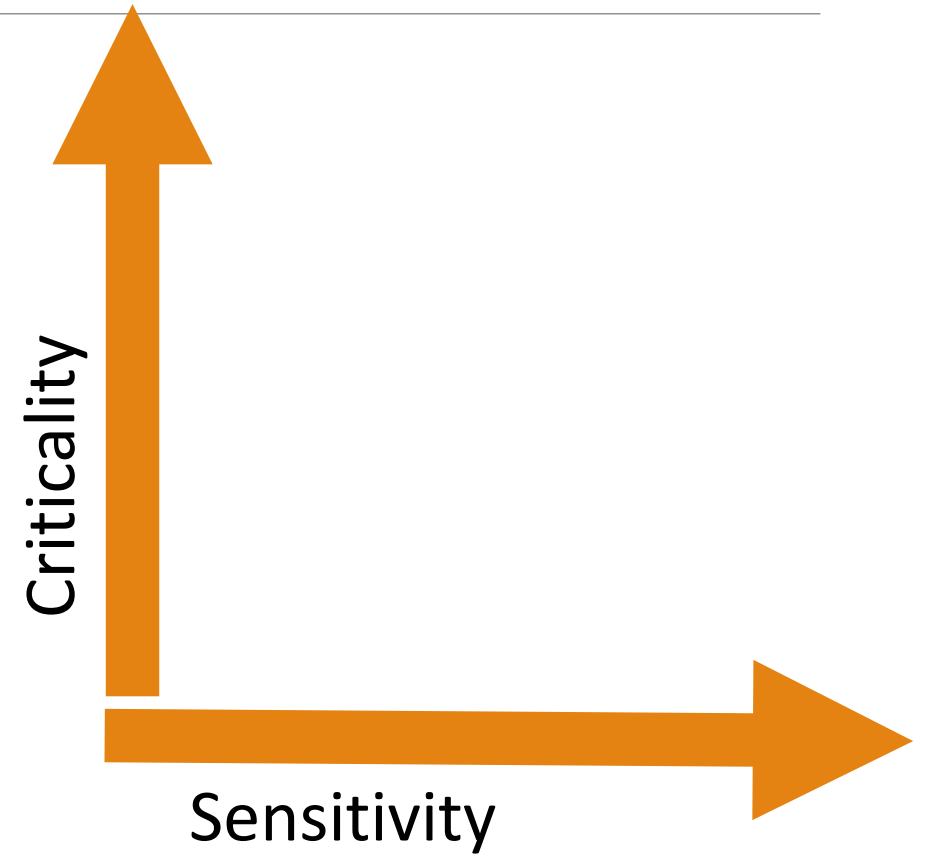
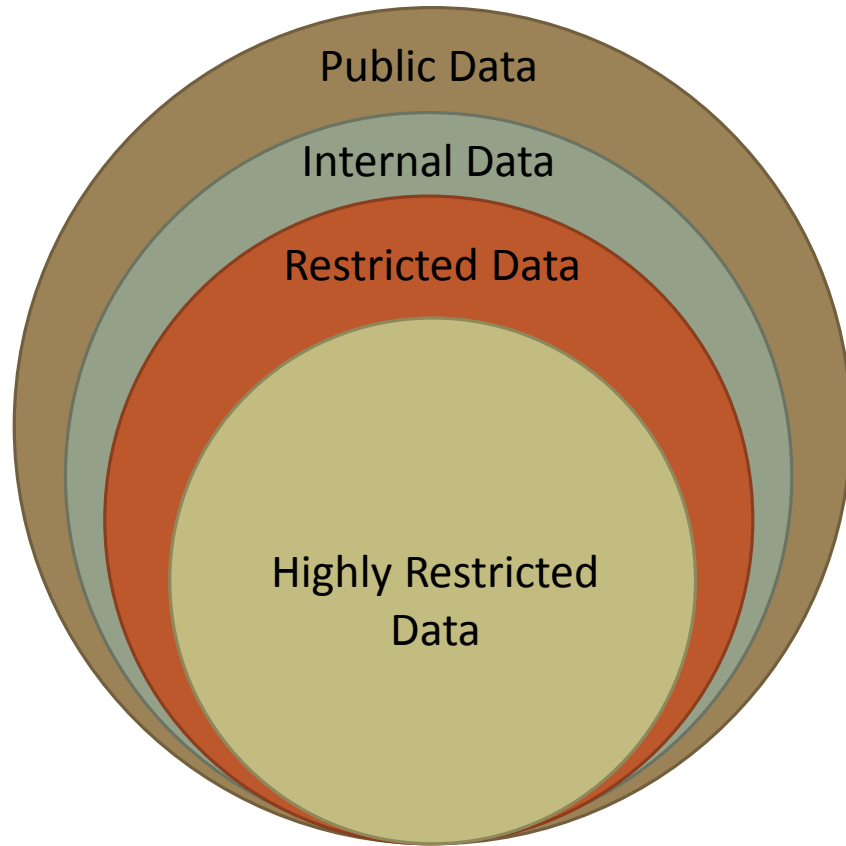
Systematic description

Controlled Vocabulary

Flexibly applied at Item level or in Aggregate

# Data Classification Models

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# Examples of Highly Protected Classes of Data

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Social Security Numbers

Credit Card numbers

Passwords and Access Codes

Personal Health Information

Biometric Data

Intellectual Property protected by non-disclosure agreements

# Criteria for Classification

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Value

Risk for disclosure

Risk for loss

Legal, regulatory, and contractual responsibility



# Data Classes at UNR

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## Public

- Directory information for employees
- Research data specifically classified as public

## Sensitive

- HR data made available to employees or third parties
- FERPA (Directory Information) made available to third parties
- University Intellectual Property

## Protected

- FERPA protected information such as student grades or class schedule
- Personally Identifiable information such as SSN (PII)
- HIPAA or patient health information
- PCI or credit card information
- Export controlled data

# Roles

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Data owner: individual with the authority and accountability for specified information

Data custodian: appointed by the data owner to assign the classification and ensure appropriate controls

# Part of a Larger Information Systems Security Policy

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Insure Data Classifications are in-line with total IS policies within the organization

Insure that Classifications are included in relevant related policies

# Review and Revision

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Keeping your data classification current with changing information needs

Identifying new classes of restricted data

Changes in legal or fiscal responsibilities

# Communicating to Owners and Users of Data

Storage	Public	Private	RESTRICTED DATA								SSN	PCI (Credit Card)	
			FERPA	Regulated PII	GLBA	Identifiable Human Subject Research	ITAR/EAR (export controlled)	HIPAA/PHI***	FISMA (Low, Moderate)	FISMA (HIGH)			
Managed server	YES	YES	YES	YES	YES	YES	YES	YES	YES**	YES	****	XX	NO
EEFS/Phoenix	YES	YES	YES	YES	YES	YES	YES	YES	YES**	YES	NO	XX	NO
<b>GU Box</b>	YES	YES	YES	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	YES**	****	NO	XX	NO
Blackboard	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	XX	NO
GU GoogleApps	YES	YES	YES	NO	NO	NO	NO	NO	Yes	NO	NO	XX	NO
DropBox/Non-GU	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	XX	NO
Locally Managed Server	Maybe*	**	NO	NO	NO	NO	NO	NO	NO	NO	NO	XX	NO
Local (C:) drive	Maybe	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	XX	NO
Portable Media (CD, Flash drive, etc)	Maybe	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	XX	NO
<b>*Permitted but not Recommended</b>													
** Requires UIISO Review of Server													
**** Consult with UIISO													
<b>XX - NOT PERMITTED WITHOUT UIISO APPROVAL</b>													
***Must comply with HIPAA Requirements; UIISO review required													

# Data Owner Policies

University of Nevada, Reno  
Data Storage Policies

Data Type <i>Data Owner</i>	Description	Allowed?				
		NevadaBox	WolfCloud	Email - Internal	Email - External	Fax
<b>Directory Information</b> <i>Human Resources</i>	Publicly accessible employee directory information.	✓	✓	✓	✓	✓
<b>Account Identification Information</b> <i>End User</i>	Private information used to access an account such as passwords and personal identification numbers (PIN)	✗	✗	✗	✗	✗
<b>University Financial Information</b> <i>University Controller</i>	UNR account numbers	✓	✓	✓	✓	✓
<b>Credit Card Information</b> <i>University Controller</i>	Credit card numbers, PINs, CCVs	✗	✗	✗	✗	✓
<b>Personally Identifiable Information (PII) - Unregulated</b> <i>Human Resource / Student Services</i>	Unregulated data such as full name and address	✓	✓	✓	✓	✓
<b>Personally Identifiable Information (PII) - Regulated</b> <i>Human Resource / Student Services</i>	Regulated data such as Social Security numbers, DOB see <a href="#">NRS 601A.040</a>	✗	✗	✗	⚠	✓
<b>FERPA</b> <i>Registrar</i>	PII relating to students; can be grades, class schedules, etc.	✓	✓	✓	⚠	✓
<b>Protect Health Information (PHI/HIPAA)</b> <i>School of Medicine: Dean, University: Division Head or VP</i>	Any information about health status, provision of health care, or payment of health care that is linked to an individual.	Please contact <a href="#">IT Support</a> for the proper storage and transmission of this type of data.				
<b>Export Controlled Data</b> <i>VPRI</i>	Further information, and a definition of Export Controlled Data, can be obtained from the Office of Sponsored Projects.	Please contact the <a href="#">Office of Sponsored Projects</a> for the proper storage and transmission of this type of data.				
<b>Personal Files</b> <i>End User</i>	Any files (including photos and music) that is unrelated to the work that you conduct for the University.	All personal files must be transmitted and stored only via personal means.				

# Getting the word out

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As part of systemic security-awareness program

Identifying key units

Onboarding new staff, and keeping current staff up to date

# Data Classification Tools

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EVALUATION, SELECTION AND USE

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# Tool Evaluation

	Includes built-in templates to support regulatory compliance	Available as a physical appliance	Available as a cloud service	Available as a VM or standalone software package	Prevents exfiltration of classified file attachments	Performs network inspection
Boldon James Classifier	X			X	X	
Code Green Networks TrueDLP	X	X	X	X	X	X
Identity Finder Sensitive Data Manager	X			X	X	X
TITUS Classification	X			X	X	
Varonis DatAdvantage	X			X		

# Features

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Defined Roles and Permissions

Encryption and secure data transmission

Auditing

Review and revision of policies and roles

Backup and recovery

# Tools follow Policy not the reverse

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Data classification tools can be helpful in carrying out set policy

However, without a clear set up policies the tools become much less useful

# Tool Selection

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Stand-Alone Tools vs. Systems

Open Source vs. Commercial

Environment

- Level of comfort
- Level of knowledge
- Level of support

# Understanding Context and Needs

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Know your records, Know what you want to do with them

What process do you want a tool to help you with?

Evaluate before adoption – not all tools will be less work

What is your end goal for your records?

# Classification tools within Records Management Workflows

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Tool placement

Tool purpose

Tool utility / convenience

Long-term sustainability (viability)

# Thank You

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