

# Building Digital Preservation Skills

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Digital**Preservation**Coalition

# Nothing Works Without Skilled Staff

- THE fundamental resource need for any successful preservation program
- Digital preservation is a multi-disciplinary undertaking
  - Knowing the skills needed is essential
  - What skills might need to be added to/further developed on your team?
- Skills and roles needed depend on:
  - Organizational context and structure
  - Current and planned DP capabilities



# Barriers to Developing Skills

- What is a DP Practitioner?
  - A new and developing discipline
- Lack of organizational support
  - No time or funding available
- Difficult to find courses
  - Practical “hands-on” options?
  - Intermediate/Advanced level opportunities?



# The Competency Framework

- Provides information on the skills, knowledge and competencies required for successful digital preservation
- Released 2022, V2 coming next week!
  - No changes to skill elements
  - Skill levels renamed
  - Some additional example activities
- Aligned with the DPC Rapid Assessment Model (RAM)



# Overview: Main Structure

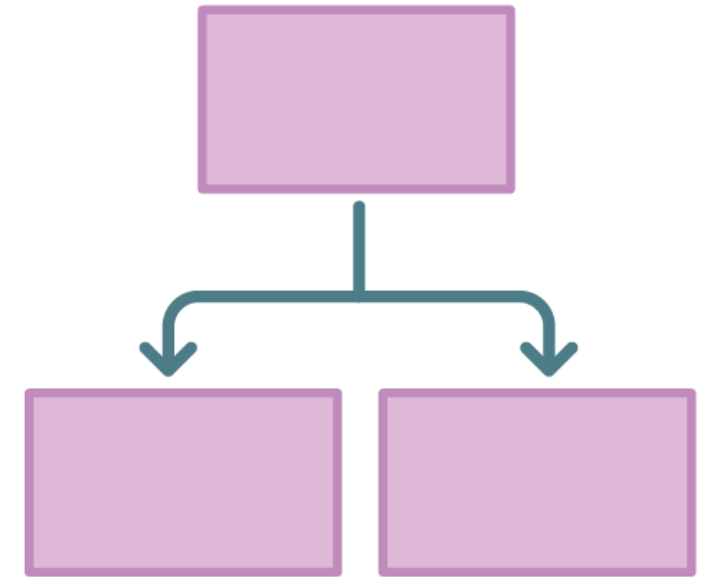
## **Five high-level competency areas**

- Overview of and quick reference to broad range of competencies required to undertake digital preservation work.

## **Twenty-eight skill elements**

- Organized in groups under the competency areas
- Break down the competencies into more clearly defined units

Presented in the following table...



Competency Area	Skill Element No.	Skill Element
<b>Governance, Resourcing, and Management</b>	1	Policy Development
	2	Risk Management
	3	Resource Management
	4	Staff Management
	5	Strategy and Planning
	6	Analysis and Decision-Making
<b>Communications and Advocacy</b>	7	Effective Communication
	8	Collaboration and Teamwork
	9	Stakeholder Analysis and Engagement
	10	User Analysis and Engagement
	11	Advocacy
	12	Training
	13	Producing Documentation
<b>Information Technology</b>	14	General IT Literacy
	15	Computer Programming
	16	System Procurement
	17	Storage Infrastructures
	18	Information Security
	19	Workflow Development and Implementation
<b>Legal and Social Responsibilities</b>	20	Legal and Regulatory Compliance
	21	Environmental Impact
	22	Inclusion and Diversity
	23	Ethics
<b>Digital Preservation Domain Specific</b>	24	Metadata Standards and Implementation
	25	Information Management Principles
	26	Approaches to Preservation
	27	DP Standards and Models
	28	Managing Access

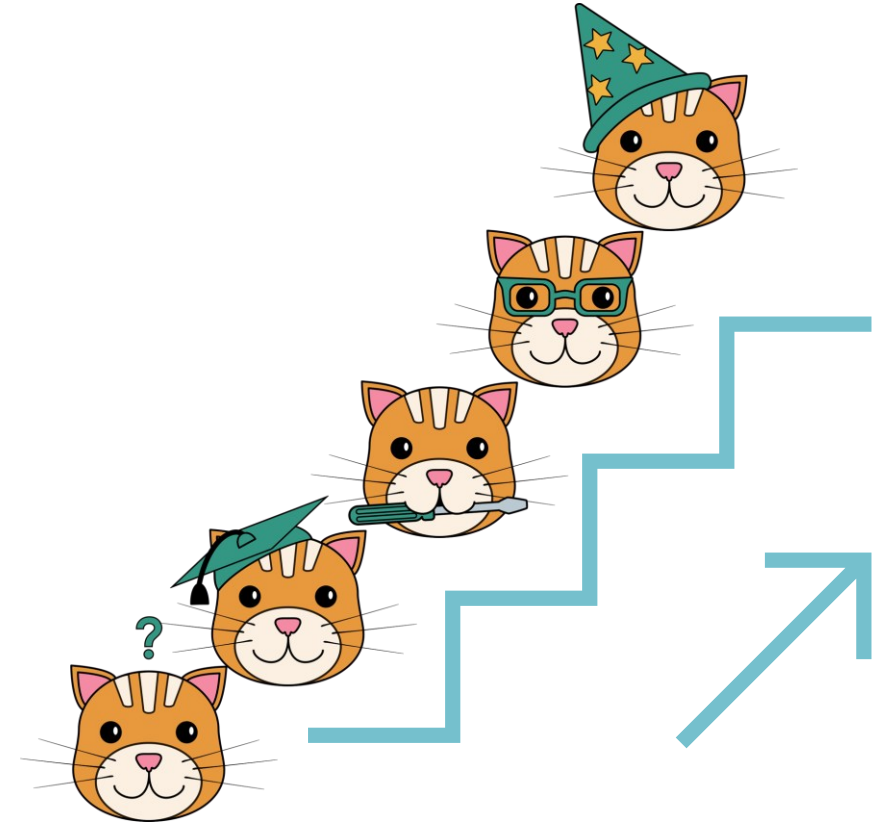
# Skill Levels

## Five skill levels

- Representing a progression of knowledge and skills

## Examples of 'activity descriptors'

- e.g., how it might be used in a statement describing a skill element in a role description at that level



Presented in the following table...

# Skill Level Descriptions

Level No.	Skill Level	Previously Known As	Description	Example Activity Descriptor Words
0	<b>Awareness</b>	<i>Novice</i>	A basic awareness of the skill element.	Has heard of, recognizes, is aware of
1	<b>Understanding</b>	<i>Beginner</i>	An understanding of the skill element (e.g. has received some training) but little or no practical experience.	Understands, has studied, is familiar with, uses, collaborates, communicates, supports
2	<b>Basic Application</b>	<i>Intermediate</i>	A sound understanding of the skill element and some experience of its practical application.	Has delivered, has used, applies, implements, inputs to, plans, selects, documents
3	<b>Advanced Application</b>	<i>Advanced</i>	A thorough understanding of the skill element and significant experience of its practical application on a regular or sustained basis.	Develops, leads on, manages, analyzes, monitors
4	<b>Expert</b>	<i>Expert</i>	An in-depth understanding of the skill element and a leader in the development of approaches to its practical application.	Innovates, authors, designs, researches

# Granularity and Examples

Additional tables provide further detail including

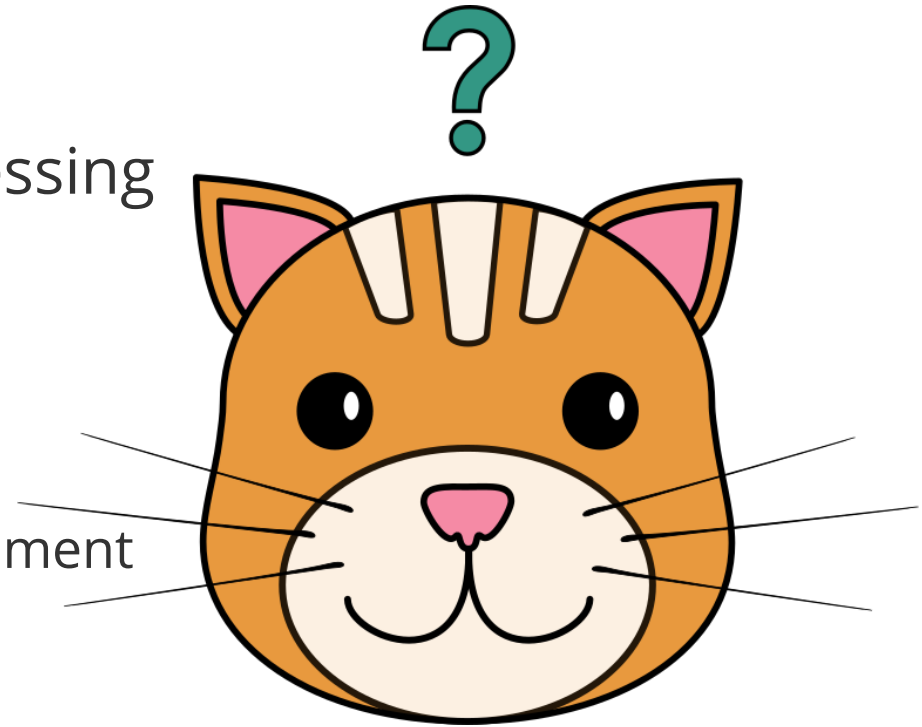
- Example statements to help clarify skill elements and how they might be presented in a role description
- Specific example activities to demonstrate different tasks where the skill element might be deployed in practice



E. Digital Preservation Domain Specific			
No.	Skill Element	Example Statement	Example Activities
24	Metadata Standards and Implementation	Can identify and implement relevant metadata standards for managing, preserving, and providing access to digital content	Developing and implementing a preservation metadata schema
			Implementing controlled vocabularies
			Creating and maintaining mechanisms for capturing the metadata required for managing digital content, e.g. digital asset registers and file manifests
			Developing and implementing a schema for structural metadata based on information package designs
			Implementing persistent identifiers
			Capturing descriptive metadata to facilitate discovery and access
25	Information Management Principles	Can understand and apply core information management principles	Ensuring the management of key record characteristics: integrity, reliability, authenticity, and usability
			Documenting provenance
			Maintaining chain of custody
			Setting collecting policies to facilitate selection
			Carrying out appraisal
			Auditing collections
26	Approaches to Preservation	Can understand, select, and implement suitable approaches to facilitate preservation	Setting retention periods and facilitating managed disposal
			Developing and implementing information package designs
			Monitoring changes that will trigger preservation actions, e.g. undertaking technology watch
			Utilizing content analysis and processing techniques, such as format analysis and digital forensics
			Developing preservation plans
27	DP Standards and Models	Can understand, select, and implement relevant digital preservation standards and models	Implementing preservation actions such as format migration or emulation
			Selecting standards and/or models to guide the development of the organization's approach to digital preservation
			Managing the continuous improvement of the organization's digital preservation capabilities
			Auditing or benchmarking the organization's digital preservation capabilities
28	Managing Access	Can plan and input to the implementation of discovery and access services	Developing systems for resource discovery and access
			Developing functionality to facilitate the use and reuse of digital content
			Facilitating access through advanced techniques such as computational access
			Incorporating accessibility into discovery and access plans
			Implementing services for user support

# What is DPC CAT?

- Developed with the support of the UK Nuclear Decommissioning Authority
- Provides practical structured processes for assessing competencies
- Toolkit contains a guidance document and two workbooks
- Workbook One:
  - Audit of an individual's skills and professional development planning
  - Role description assessments
- Workbook Two:
  - Audit of digital preservation skills across an organization (linked to DPC RAM)



# Individual Skills Audit

A worksheet to assess skill levels against the elements of the Framework in the **'Audit and Development Planning'** tab.

Skill Area	No.	Skill Element	Relevant to Role?	Current Skill Level - Number	Current Skill Level - Text	Target Skill Level - Number (optional)	Target Skill Level - Text (optional)	Ideas on How to Increase Skill Level (optional)
Governance, Resourcing, and Management	1	Policy Development	Yes	1	Understanding	2	Basic Application	Assist Digital Archivist with forthcoming policy
	2	Risk Management	Yes	0	Awareness	1	Understanding	DPC risk management training course
	3	Resource Management	No					
	4	Staff Management	No					
	5	Strategy and Planning	Yes	1	Understanding	2	Basic Application	Draft project plan for review by mentor
	6	Analysis and Decision-Making	Yes	2	Basic Application	2	Basic Application	

List of Skill Areas and Elements

Blank fields for you to work through each, identifying relevance and assessing skills using the five levels

# Role Description Audit

In the DPC CAT Individual Skill Audit workbook, the worksheet will be in the **‘Role Description Assessment’** tab

Skill Area	No.	Skill Element	Relevant to Role?	Related Tasks/ Responsibilities	Included in Role Description?	Text from Role Description	Update Required?	Notes
Governance, Resourcing, and Management	1	Policy Development	Yes	Developed organizational digital preservation policy and will manage biannual review and update process	Yes	Leads development and review of digital preservation policy	No	
	2	Risk Management	Yes	Risk assessments for DP systems, workflows, and preserved content	No	N/A	Yes	Need explicit mention risk management responsibilities, will help establish case for further training
	3	Resource Management	No					N/A
	4	Staff Management	Yes	Line manager for 2 digital preservation officers	Yes	Will assume line management duties as required	Yes	Needs updating to be a better representation of responsibilities, i.e. that this has become an essential part of the role.

List of Skill Areas and Elements

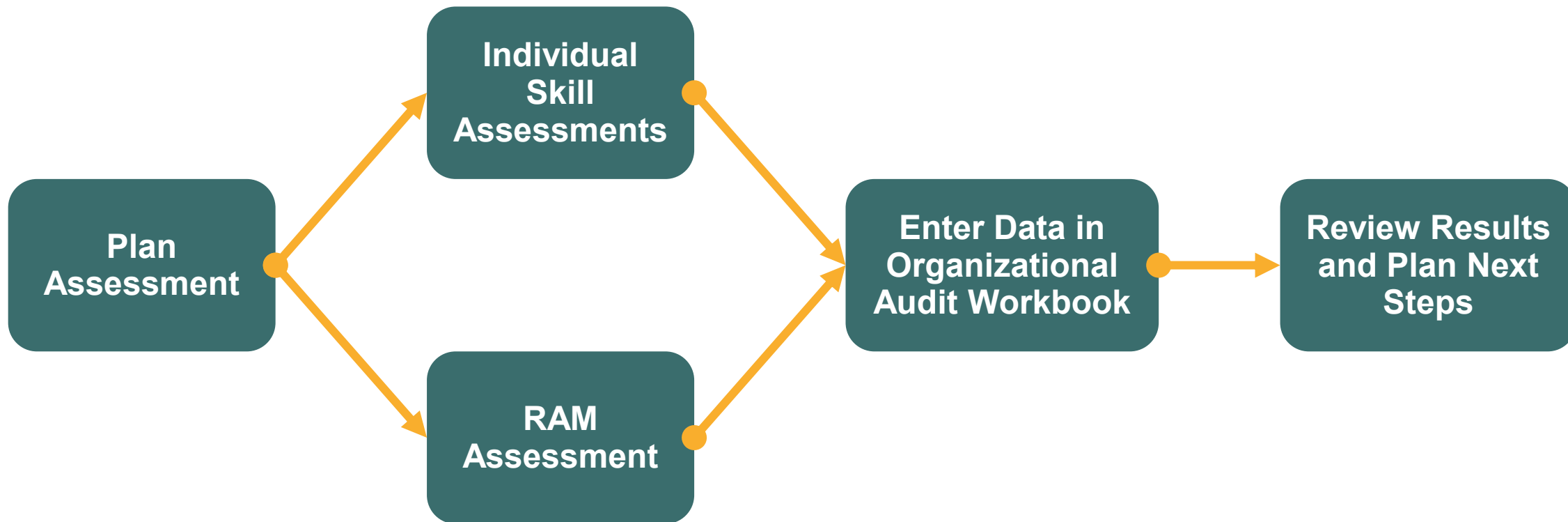
Work through identifying relevance and assess current tasks and responsibilities with those provided in a role description

# DPC CAT Organizational Audit

- Benchmark competencies against current and target DP capabilities (DPC RAM)
- Identifies:
  - Required skill levels
  - Highest and average skill levels for staff
  - Where gaps exist.



# Organizational Skills Assessment Process



# RAM Scores

	RAM Section	Current Level	Target Level		Level Number	Level Description
A	Organizational Viability	2	3		0	Minimal Awareness
B	Policy and Strategy	1	3		1	Awareness
C	Legal Basis	1	2		2	Basic
D	IT Capability	2	3		3	Managed
E	Continuous Improvement	2	3		4	Optimized
F	Community	3	3			
G	Acquisition, Transfer and Ingest	1	2			
H	Bitstream Preservation	2	3			
I	Content Preservation	0	2			
J	Metadata Management	2	3			
K	Discovery and Access	1	2			

# Individual Assessment Scores

		Name of Staff Member (Optional)	Hugh Culber	Keyla Detmer	Michael Burnham	Joann Owosekun
		Job Title (Optional)	Digital Archivist	Digital Collections Officer	Digital Program Manager	Digital Collections Officer
<b>Governance, Resourcing, and Management</b>	1	Policy Development	2	N/A	3	N/A
	2	Risk Management	1	N/A	2	0
	3	Resource Management	0	N/A	2	N/A
	4	Staff Management	1	N/A	2	N/A
	5	Strategy and Planning	2	0	3	1
	6	Analysis and Decision-Making	3	2	3	1
<b>Communications and Advocacy</b>	7	Effective Communication	3	2	3	2
	8	Collaboration and Teamwork	3	3	4	2
	9	Stakeholder Analysis and Engagement	1	N/A	1	N/A
	10	User Analysis and Engagement	1	0	0	0
	11	Advocacy	2	1	3	1
	12	Training	1	N/A	2	N/A
	13	Producing Documentation	2	1	1	1
	14	General IT Literacy	2	3	2	2
	15	Computer Programming	1	0	1	N/A

# Organizational Skills Report

		Required Skill Level for Current RAM Maturity		Required Skill Level for Target RAM Level		Highest Skill Level		Skill Gap for Current RAM	Skill Gap for Target RAM	Count of Staff Scoring Skill	Average Skill Level		Skill Gap for Current RAM	Skill Gap for Target RAM
Governance, Resourcing, and Management	1 Policy Development	1	Understanding	3	Advanced Application	3	Advanced Application	No Gap	No Gap	2	2.5	Basic Application	No Gap	1 Level
	2 Risk Management	2	Basic Application	2	Basic Application	2	Basic Application	No Gap	No Gap	3	1	Understanding	1 Level	1 Level
	3 Resource Management	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	2	1	Understanding	1 Level	2 Levels
	4 Staff Management	2	Basic Application	2	Basic Application	2	Basic Application	No Gap	No Gap	2	1.5	Understanding	1 Level	1 Level
	5 Strategy and Planning	1	Understanding	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	1.5	Understanding	No Gap	2 Levels
	6 Analysis and Decision-Making	2	Basic Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	2.25	Basic Application	No Gap	1 Level
Communications and Advocacy	7 Effective Communication	3	Advanced Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	2.5	Basic Application	1 Level	1 Level
	8 Collaboration and Teamwork	1	Understanding	2	Basic Application	4	Expert	No Gap	No Gap	4	3	Advanced Application	No Gap	No Gap
	9 Stakeholder Analysis and Engagement	2	Basic Application	3	Advanced Application	1	Understanding	1 Level	2 Levels	2	1	Understanding	1 Level	2 Levels
	10 User Analysis and Engagement	1	Understanding	2	Basic Application	1	Understanding	No Gap	1 Level	4	0.25	Awareness	1 Level	2 Levels
	11 Advocacy	2	Basic Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	1.75	Understanding	1 Level	2 Levels
	12 Training	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	2	1.5	Understanding	1 Level	2 Levels
Information Technology	13 Producing Documentation	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	4	1.25	Understanding	1 Level	2 Levels
	14 General IT Literacy	2	Basic Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	2.25	Basic Application	No Gap	1 Level
	15 Computer Programming	2	Basic Application	3	Advanced Application	1	Understanding	1 Level	2 Levels	3	0.6667	Awareness	2 Levels	3 Levels
	16 System Procurement	2	Basic Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	2	1.5	Understanding	1 Level	2 Levels
	17 Storage Infrastructures	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	4	1	Understanding	1 Level	2 Levels
Legal and Social Responsibilities	18 Information Security	2	Basic Application	3	Advanced Application	1	Understanding	1 Level	2 Levels	4	0.25	Awareness	2 Levels	3 Levels
	19 Workflow Development and Implementation	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	4	1	Understanding	1 Level	2 Levels
	20 Legal and Regularity Compliance	1	Understanding	2	Basic Application	2	Basic Application	No Gap	No Gap	4	1	Understanding	No Gap	1 Level
	21 Environmental Impact	1	Understanding	2	Basic Application	1	Understanding	No Gap	1 Level	4	0.25	Awareness	1 Level	2 Levels
Digital Preservation Domain Specific	22 Inclusion and Diversity	2	Basic Application	2	Basic Application	1	Understanding	1 Level	1 Level	4	0.75	Awareness	2 Levels	2 Levels
	23 Ethics	1	Understanding	2	Basic Application	3	Advanced Application	No Gap	No Gap	4	1.5	Understanding	No Gap	1 Level
	24 Metadata Standards and Implementation	2	Basic Application	3	Advanced Application	2	Basic Application	No Gap	1 Level	4	1.5	Understanding	1 Level	2 Levels
	25 Information Management Principles	1	Understanding	2	Basic Application	3	Advanced Application	No Gap	No Gap	4	1.75	Understanding	No Gap	1 Level
	26 Approaches to Preservation	2	Basic Application	3	Advanced Application	1	Understanding	1 Level	2 Levels	4	0.5	Awareness	2 Levels	3 Levels
	27 DP Standards and Models	2	Basic Application	3	Advanced Application	3	Advanced Application	No Gap	No Gap	4	1.75	Understanding	1 Level	2 Levels
	28 Managing Access	1	Understanding	2	Basic Application	1	Understanding	No Gap	1 Level	3	0.3333	Awareness	1 Level	2 Levels

# Example Role Descriptions

- Provide an indication of skills (and skill levels) required for particular role types
- Eight role descriptions:
  - Info Management Graduate
  - DP Trainee
  - DP Officer
  - DP Archivist/Librarian
  - Web Archivist
  - DP Developer
  - DP Program Manager
  - Senior Executive/Administrator

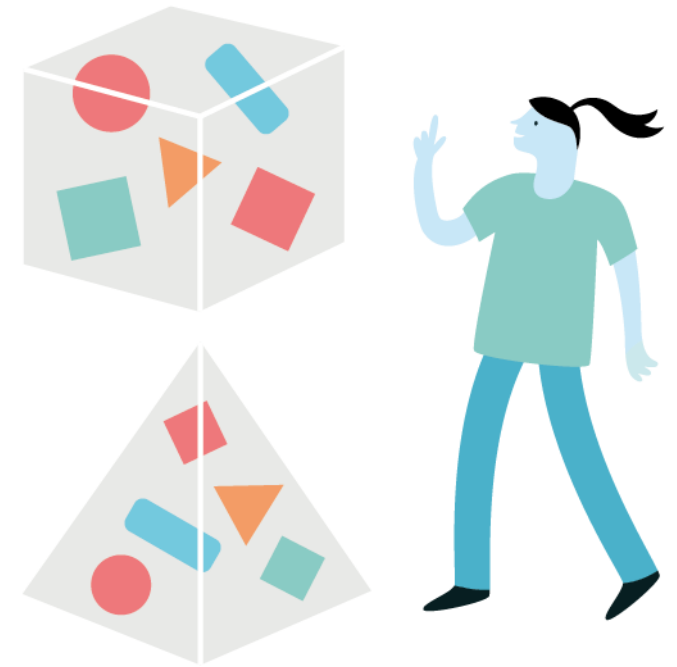


# More Workforce Development Resources

- Novice to Know-How training
  - Beginners, email preservation, digital asset registers
- Digital Preservation Handbook
- Labour Market Analysis
- Mental Health and Wellbeing in DP Report

And for DPC Members:

- Career Development Grants
- Reading Club



and now a new resource!

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www.dpconline.org

# DigiPres Learning Resources Portal

- Developed as part of the iPRES 2024 “Start to Preserve” stream
  - Huge thanks to Andy Jackson for doing all the technical wizardry!
- Aims to help with finding resources for learning and skills development
- Aligns with Competency Framework
- Open to all to access and edit
- Hosted and maintained by the DPC



# Let's Have a Look!

DigiPres Learning Resources

[Resources](#) [Skills](#) [Roles](#) [Search](#)

## Welcome to the DigiPres Learning Resources Portal!

The aim of this new community resource is to help digital preservation practitioners, educators, and students find training and development opportunities and content. It was first developed as part of the [iPRES 2024](#) Start to Preserve stream and is maintained by the [Digital Preservation Coalition](#).

Contributions and updates are welcome from anyone in the digital preservation community. If you've taken an interesting course or found a great new resource you'd like to share, please do add it!


To browse the current entries listed, please visit the [Resources page](#). To search for resources by keyword, visit the [Search page](#). It is also possible to browse by the [Skills](#) and [Roles](#) defined by the DPC's [Digital Preservation Competency Framework](#).

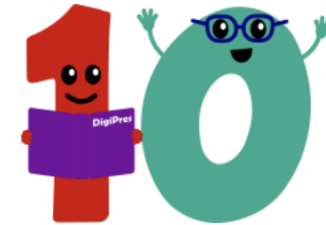
The resource portal will continue to be updated and improved in line with feedback from the digital preservation community. If you have any questions about the resource and how to use it, please email [sharon.mcmeekin@dpconline.org](mailto:sharon.mcmeekin@dpconline.org).

If you would like to edit or contribute to the resource, this can be done via the [content management system](#). You will need to be logged in to a GitHub account to make any edits or additions. All entries will then be approved by an admin before appearing online.

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