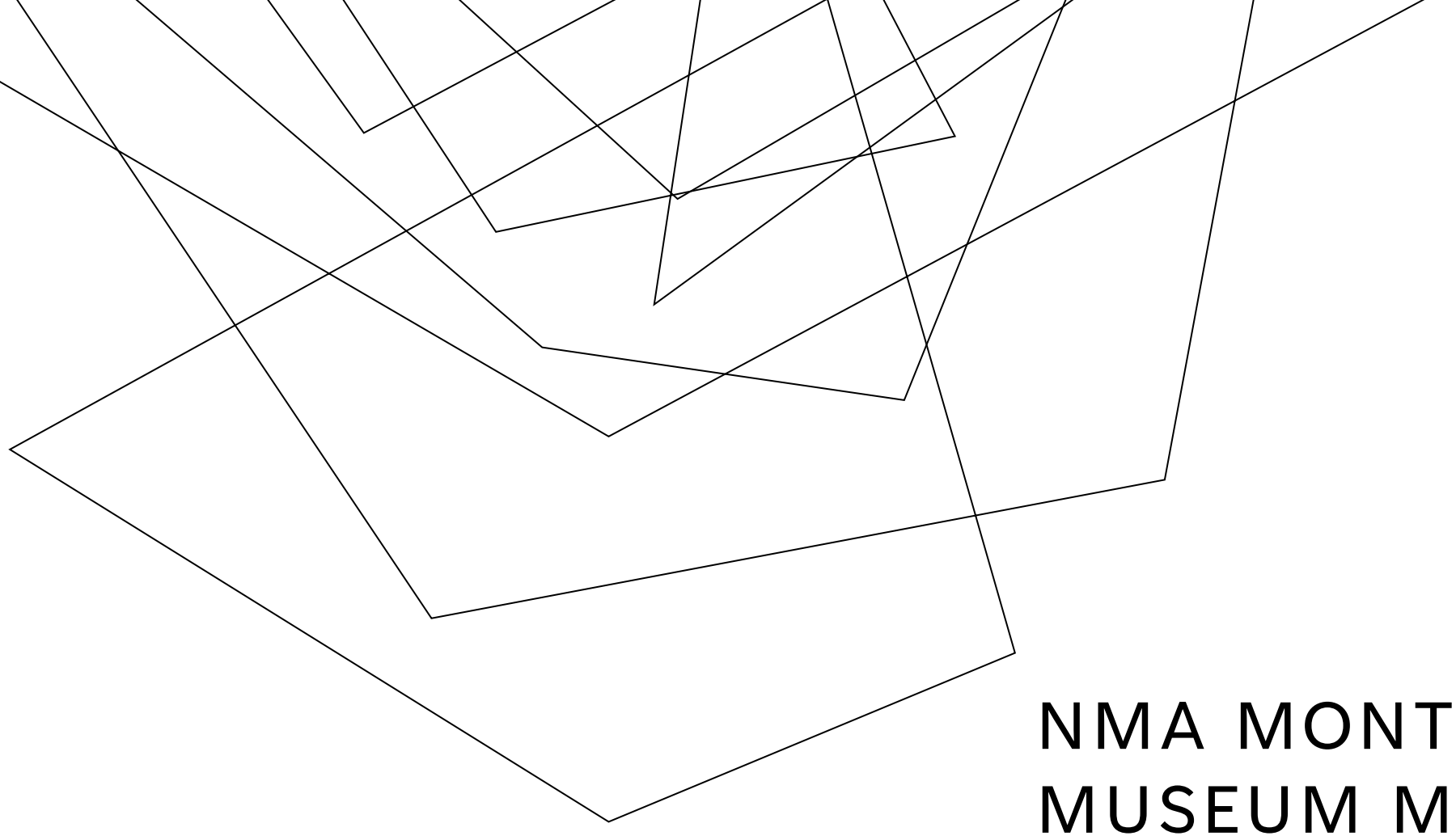


NMA MONTHLY MUSEUM MUSING: DIGITAL IMAGING

Karen Keehr, Archivist

American Historical Society of Germans from Russia

AGENDA

Why Digitize

Creating a Plan

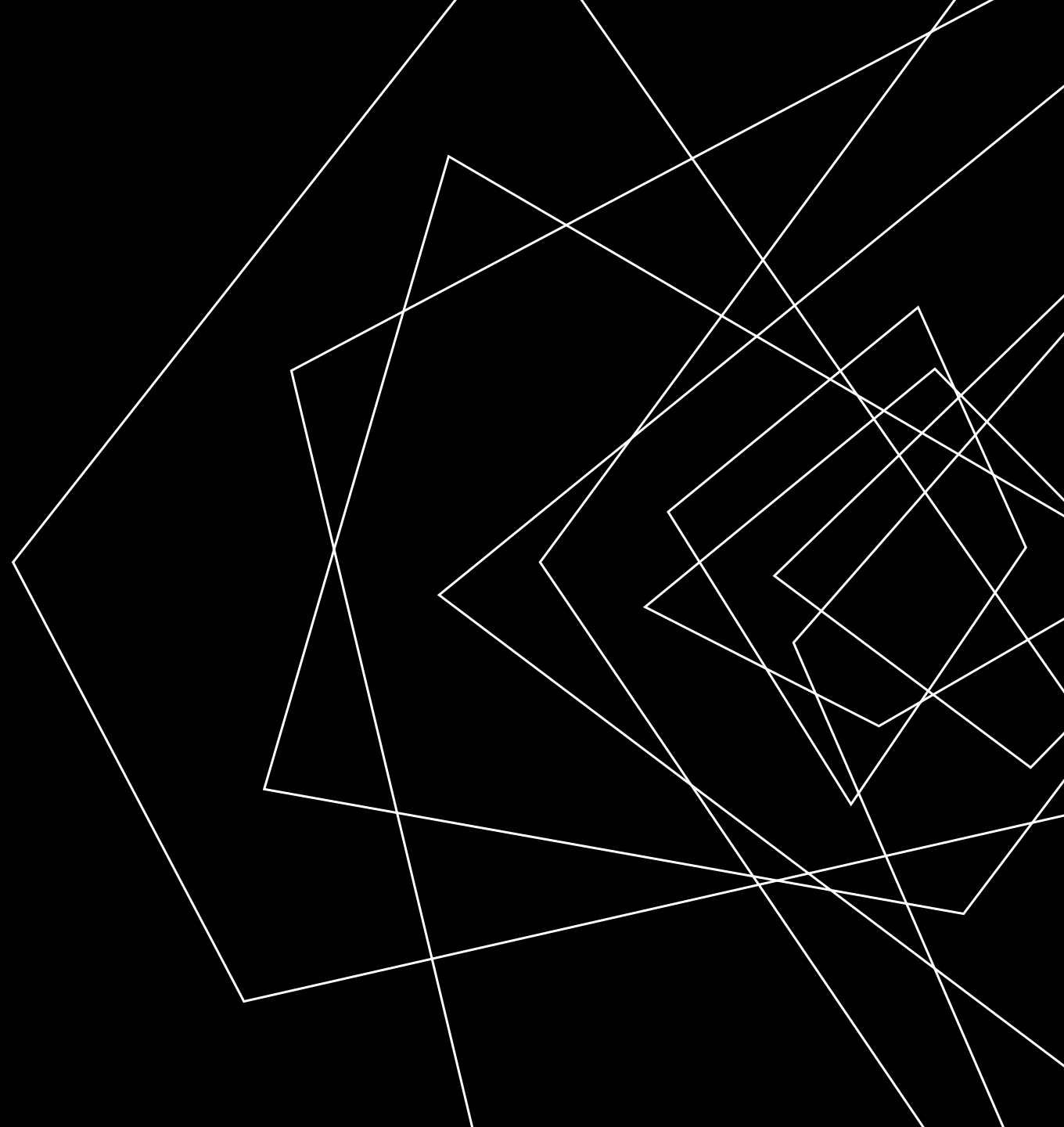
Setting Priorities

Looking to the Future

Finding Resources

Setting Standards

Creating Access



WHY DO WE DIGITIZE?

- Preservation
  - Digital surrogates protect fragile & valuable originals from handling
- Documentation
  - Records the condition of the object’s condition
  - Aids in Disaster Recover
- Access
  - Increase the size of the audience

THE FEAR OF DIGITAL IMAGING

- If everything is online, will people still come to my museum?
  - Yes! Increases awareness
  - Highlight items not on exhibit
- Technology is obsolete the minute you take it out of the box, so why bother?
  - Not an excuse for getting started
  - Only a reason for careful planning
- It’s too expensive.
  - If you build it, they will come
  - Show them your plan and the benefits

NOT THE ANSWER

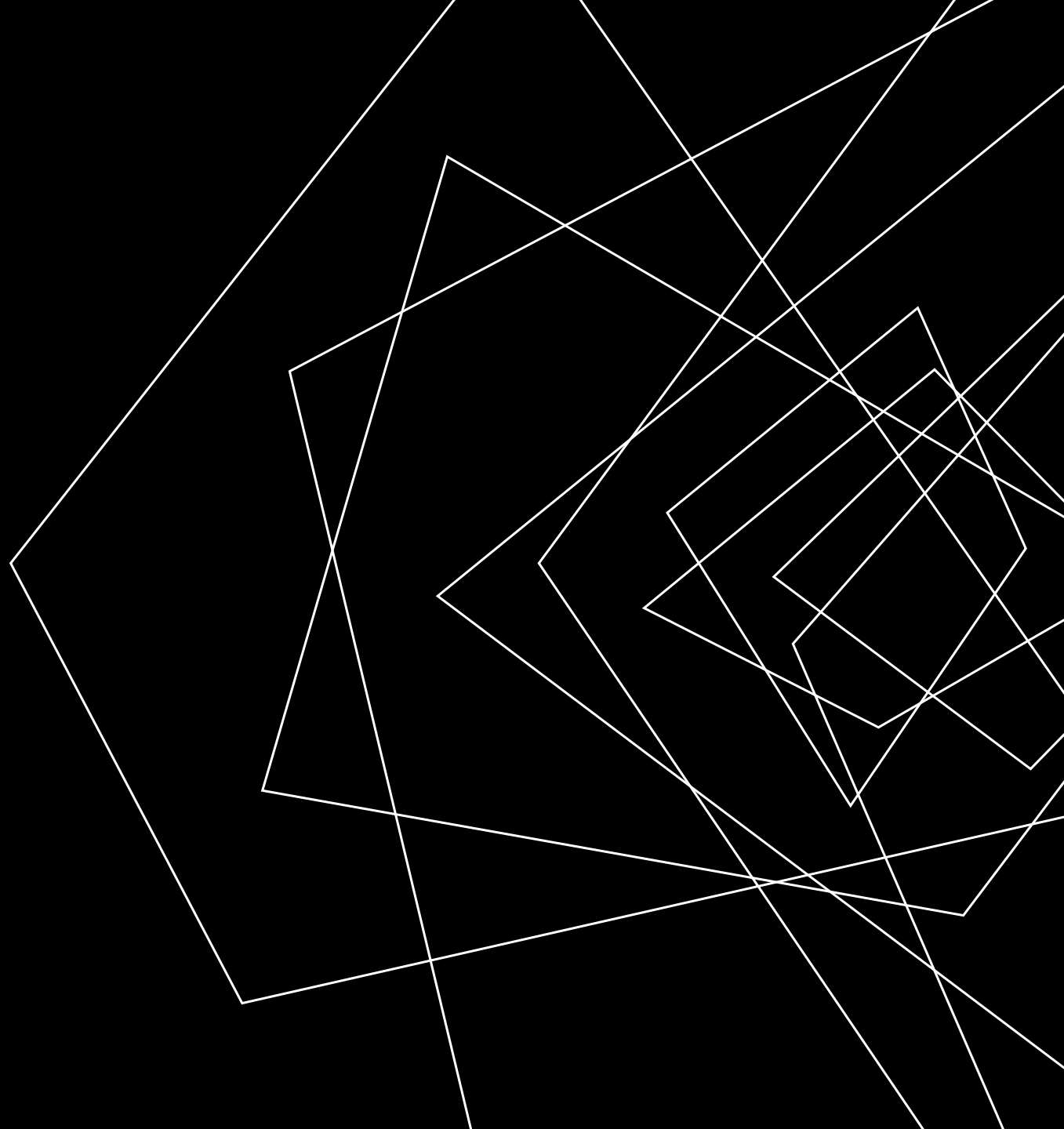
- Just one TOOL in our arsenal
  - Preservation
  - Interpretation
  - Education
- It is hard, time consuming, takes specialized training and needs a continuous source of funding/resources
  - But the benefits often outweigh any negative

ROLE OF DIGITAL IMAGES

- Protect the Original
  - Sufficient quality to be used as ready reference instead of the original
  - Preservation goals meet, originals protected by limited access
- Represent Originals
  - Used to fulfill most, if not all, of the research and learning potential of the original
  - “full information capture”
- Transcend Originals
  - Digital product is used for purposes that are imposable to achieve with original sources
  - Such as special light to draw out details obscured by aging, use, and damage

MAKING THE COMMITMENT

- Investing valuable resources
  - Time, staff, money
- Must be a shared goal with the leadership as well as the followers
- Digital imaging is a commitment
  - Your budget should reflect that
  - Plan for upgrades and expansions

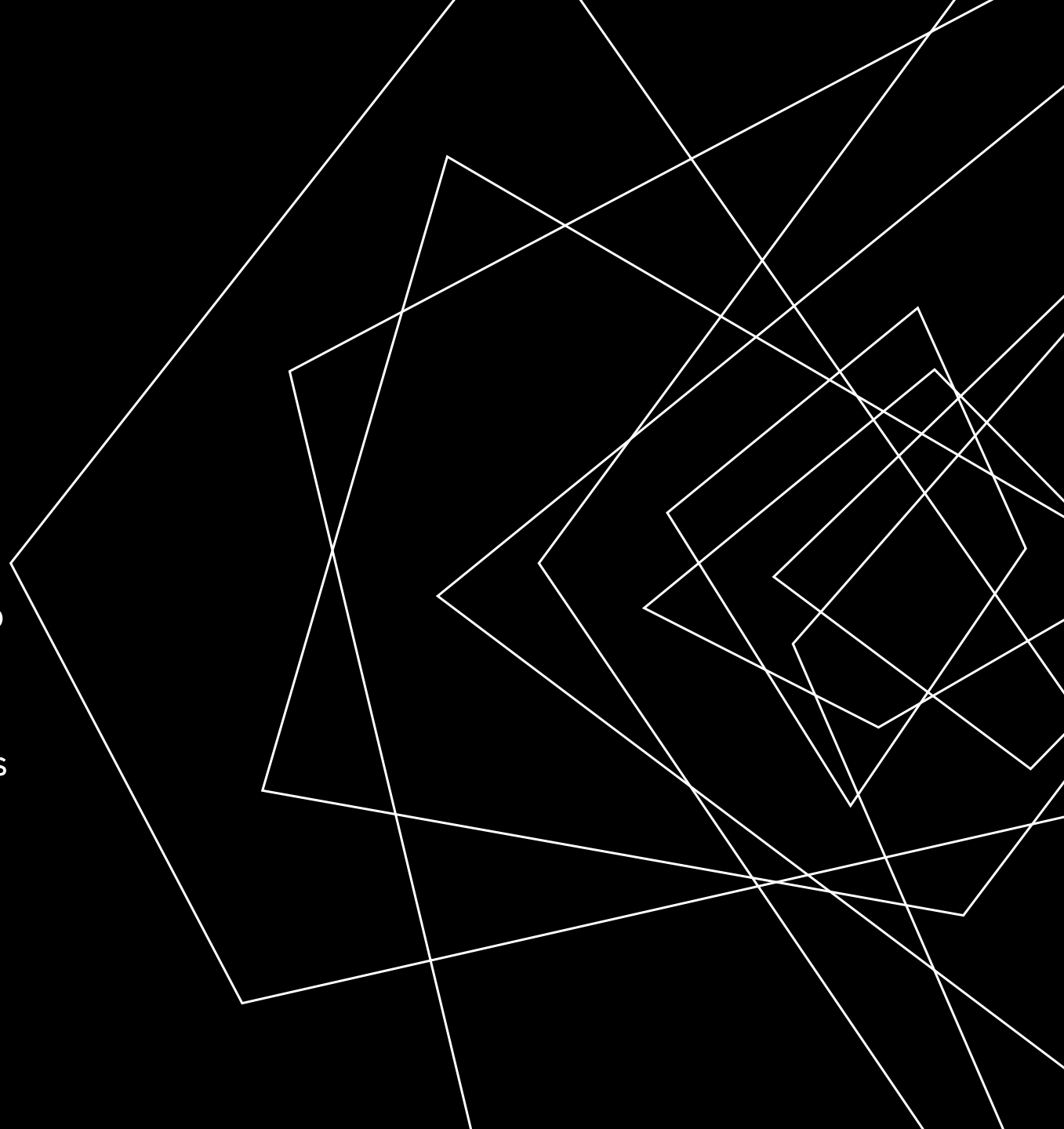


PLANNING IS KEY

- Anticipate your needs
  - Equipment, staffing, software
- Understand why
  - Preservation, access, or both?
- Create policies
  - Quality control
  - “Do it right, do it once”
- Help secure funding
  - Grants, donations, even volunteers
  - A good plan builds confidence

LIBRARY OF CONGRESS
DPOE MODULES

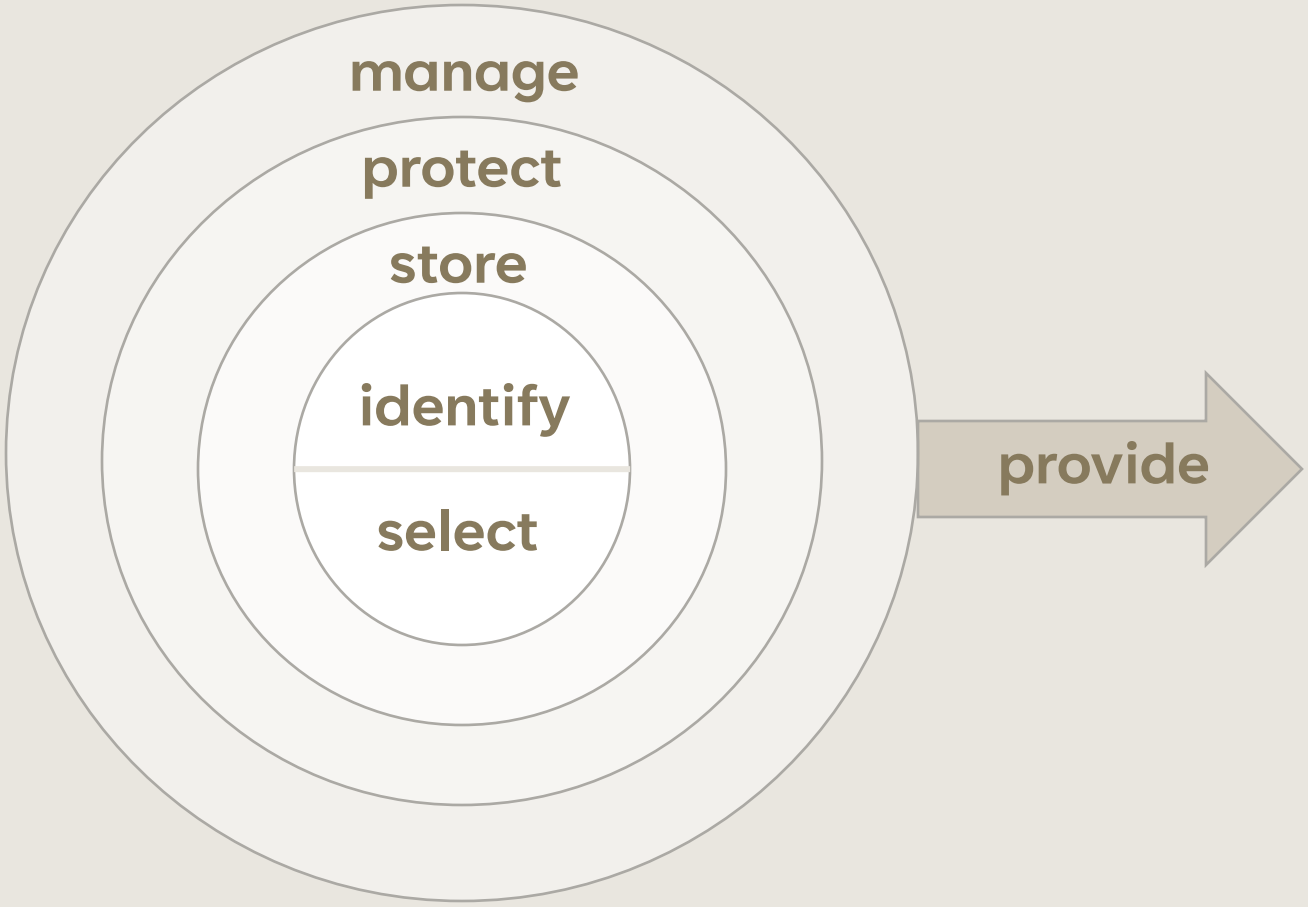
- Developed to guide Libraries, Museums, and Heritage institutions on preservation of digital content
- Apply the same core modules to the planning
  - Ahead of the game when it comes to preserving your digital content
- Learn more at www.digitalpreservation.gov



6 MODULES

1. Identify
2. Select
3. Store
4. Protect
5. Manage
6. Provide

Managing Content Over Time



IDENTIFY

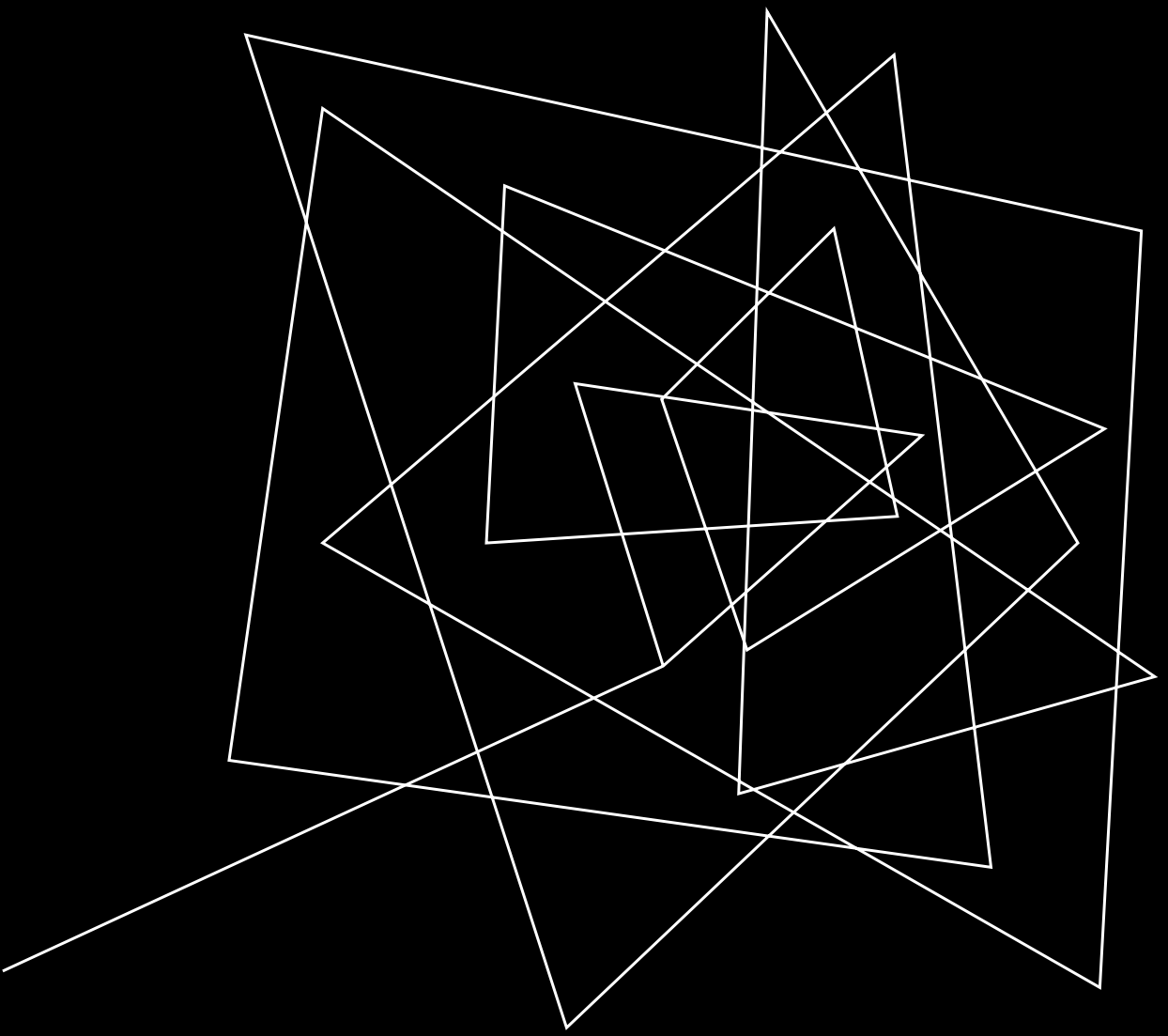
- Inventory your collection
  - What type of materials do you have?
    - Photographs, manuscript, library, maps
    - Transparencies: Negatives, slides
    - Oversized: maps, blueprints, posters
  - What's in your collection?
    - Identify special or rare content
    - Indexes
  - How big is your collection?

IMPORTANCE OF AN INVENTORY

- Just having an inventory is more important then how you do
  - Simple database vs. Complex collection software
- Identify what needs to be preserved
  - “At Risk” collections
    - Nitrate and acetate negatives
    - Fragile documents
- Allows you to plan for resources
  - Time, staff, technology (hardware & software)

USING AN INVENTORY TO PLAN

- Good preservation decisions are based on an **understanding** of the possible content to be preserved
- The Identify stage addresses
  - What content do I have?
  - What content may I have?
  - What content shall I have?
  - What content must I have?
  - What content could I have?
    - By right, purchase, persuasion, coercion



IDENTIFYING TECHNOLOGY NEEDS

- Computers & workstations
  - Software for management (metadata) and access
- Severs & Storage
- Scanners & digital imaging devices
  - Transparency media adaptors
  - Digital cameras
  - Slide scanners
- Peripherals
  - Printers
  - Cloud Storage

SELECT

- In a Museum or Archives, space is at premium
- In the digital world, storage may be cheap, the management is not
  - Especially over time
- Our collection policies and mission statements guide what we accession
  - Can’t accession everything
  - Can’t digitize everything
- What we digitize should reflect the same policies and mission

SETTING PRIORITIES

Things to consider when prioritize

- Most significant (producer, content)
- Most requested
- Most extensive
- Most fragile
- Most unique (only source)
- Easiest (e.g. most familiar)
- Oldest (possible historical importance)
- Newest (possible immediate interest)
- Mandate (local, legislation, etc.)

CONSIDERATION DURING EVALUATION

Stop if or when the answer is “no”...

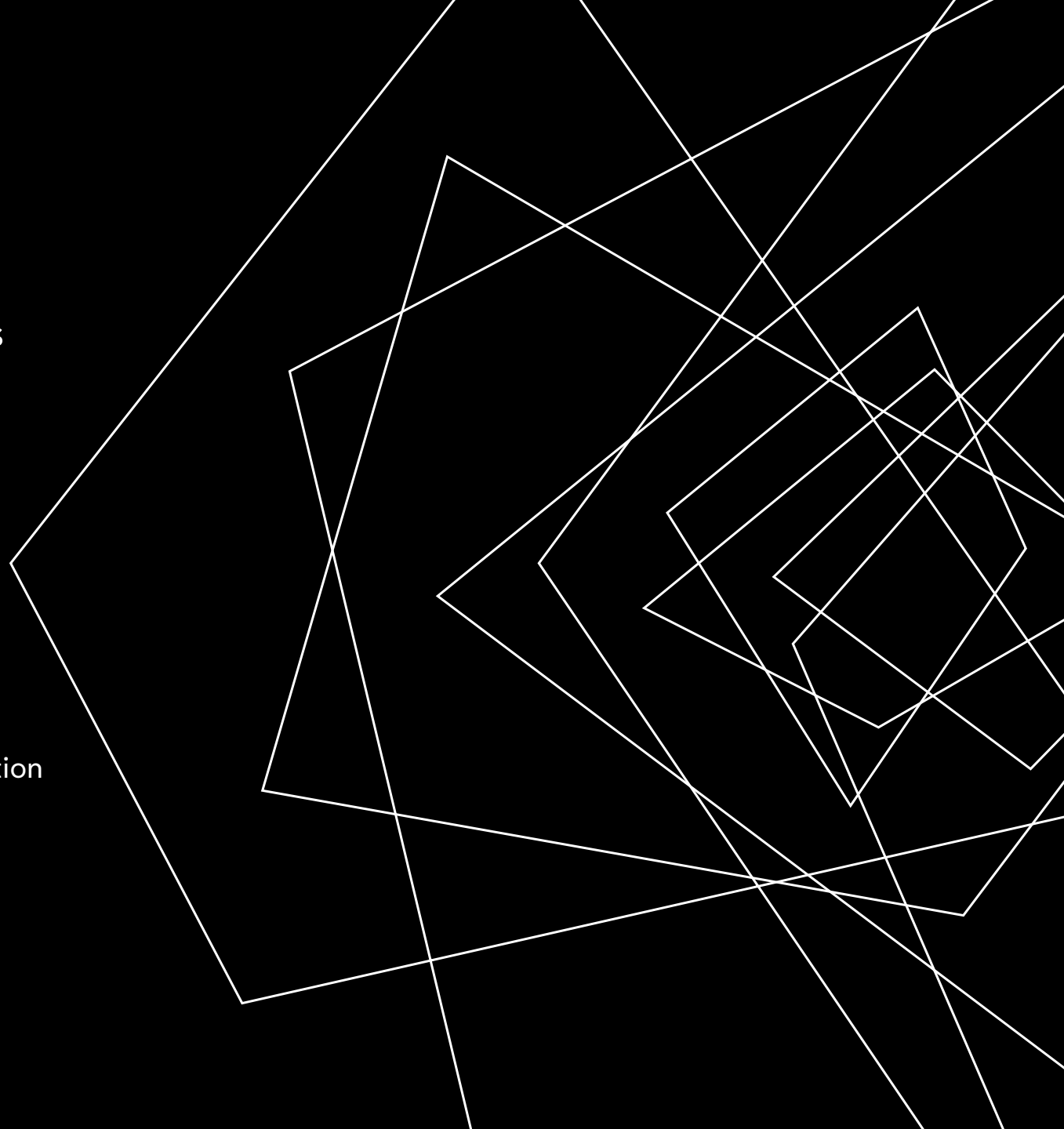
1. Content
   - Does the content have value?
   - Does it fit your scope?
2. Technical
   - Is it feasible for you to preserve the content?
3. Access
   - Is it possible to make the content available?
   - Is it available somewhere else?

THINGS TO CONSIDER

- Create a realistic timetable
  - My experience: approximately 10-15 per image
    - Scan
    - Metadata
    - Quality control
- Staffing
  - Training
  - Project manager
  - Volunteers
- Be flexible
  - Priorities change
  - Revisit often

STORE

- Archival Storage manages content as objects
- Digital Content (Files + Metadata = Object)
  - May contain different types of files
    - Images, text, sound, video, maps, etc.
  - Requires some identification and description
    - Captured as METADATA
  - Needs at least two copies in at least two places



WHAT ARE DIGITAL IMAGES?

- Digital surrogates
  - Digital copy made from original print or negative
  - Can be made by scanner or digital camera
- Born digital
  - Original made by digital camera
  - No prior analog copy

IMAGE FILES SAMPLE STANDARDS

Master files

- Create a standard
- High resolution (600-1200 ppi)
- Uncompressed .tiff
  - No information lost
- Not altered or edited
  - No “Photoshopping”
- Backed up and stored separately

Derivative or Access files

- Size & resolution based on project or need
- Lower resolution
  - Print: 300 dpi
  - Screen: 150 ppi
- Compressed files: .jpg
- Edit the copy
  - Adjust color
  - Remove dust, scratches, tears, etc

AHSGR ARCHIVAL RECORDS STANDARDS FOR DIGITAL IMAGES:

Material	Bit Depth	Color Mode	Resolution	File Format
Printed Text	16-bit or 24-bit	Color	400-600 ppi	Uncompress Tiff or pdf
Handwritten Text	16-bit or 24-bit	Color	400-600 ppi	Uncompress Tiff or pdf
Newspapers	16-bit or 24 bit	Greyscale or Color	400-600 ppi	Uncompress Tiff or pdf
Photographs	24-bit	Color	5000 pixels across long dimension	Uncompress Tiff
Negatives and Transparencies	16-bit or 24-bit	Greyscale or Color	5000 pixels across long dimension	Uncompress Tiff
Oversized Materials (maps, surname charts, certificates, etc.)	16-bit or 24-bit	Color	400-600 ppi	Uncompress Tiff or pdf

Standards based on Federal Agencies Digital Guidelines Initiative (FADGI)

DIGITAL IMAGING BASIC PRINCIPLES

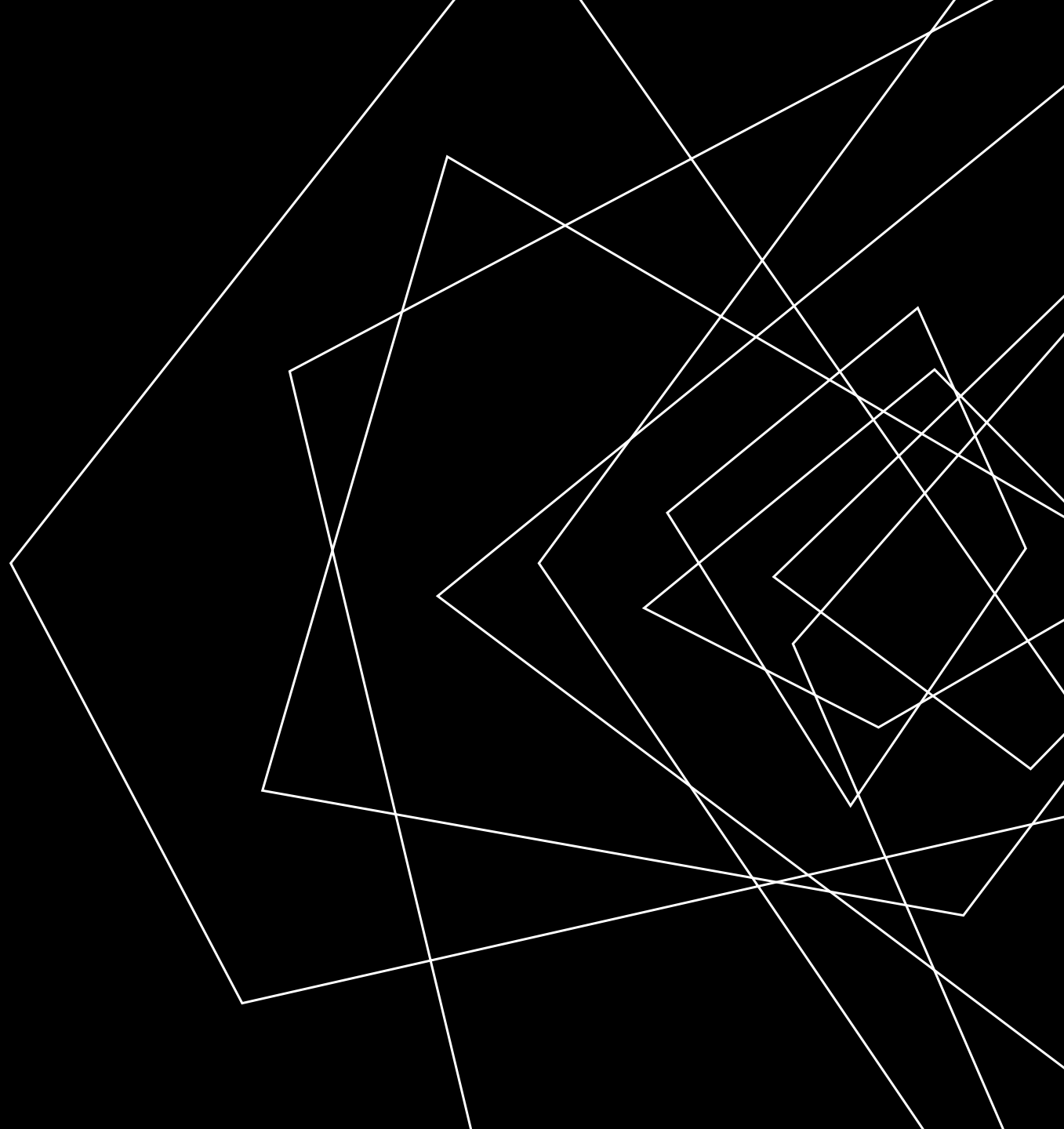
- Scan at the **highest resolution** appropriate.
- Scan at an **appropriate level** of quality to avoid re-scanning.
- Scan the **original document** rather than copy to capture the best quality image.
- Create an **uncompressed master image** file which can be used to produce access copies.
- Select equipment based on **optical resolution** as opposed to interpolated resolution as this will produce more accurate scans.
- Use **non-proprietary components**.
- **Monitor and recopy files as needed**.
- Implement a **migration strategy** to transfer data across generations of technology.
  - Transfer files to **new media** as it becomes widely available.
  - Do not let more than **5 years** elapse before refreshing your data.
  - Longevity is less important than the **ability to access**.

IMPORTANCE OF QUALITY CONTROL

- Do it once, do it right
  - Low tolerance for error
- Unlike microfilm, Digital conversion places less emphasis on obtaining a faithful reproduction in favor of finding the **best representation of the original** in digital form.
- Goal of preservation quality is to capture **as much intellectual and visual content as technically possible**
  - Present it to views in the most appropriate to their needs

FILE NAMING CONVENTIONS

- Each Digital Object should be assigned an unique identifier
- Follow a Consistent Naming Format
  - Ongoing identification
  - Retrieval
- Can be based on Object ID or Archival Collection Numbers.

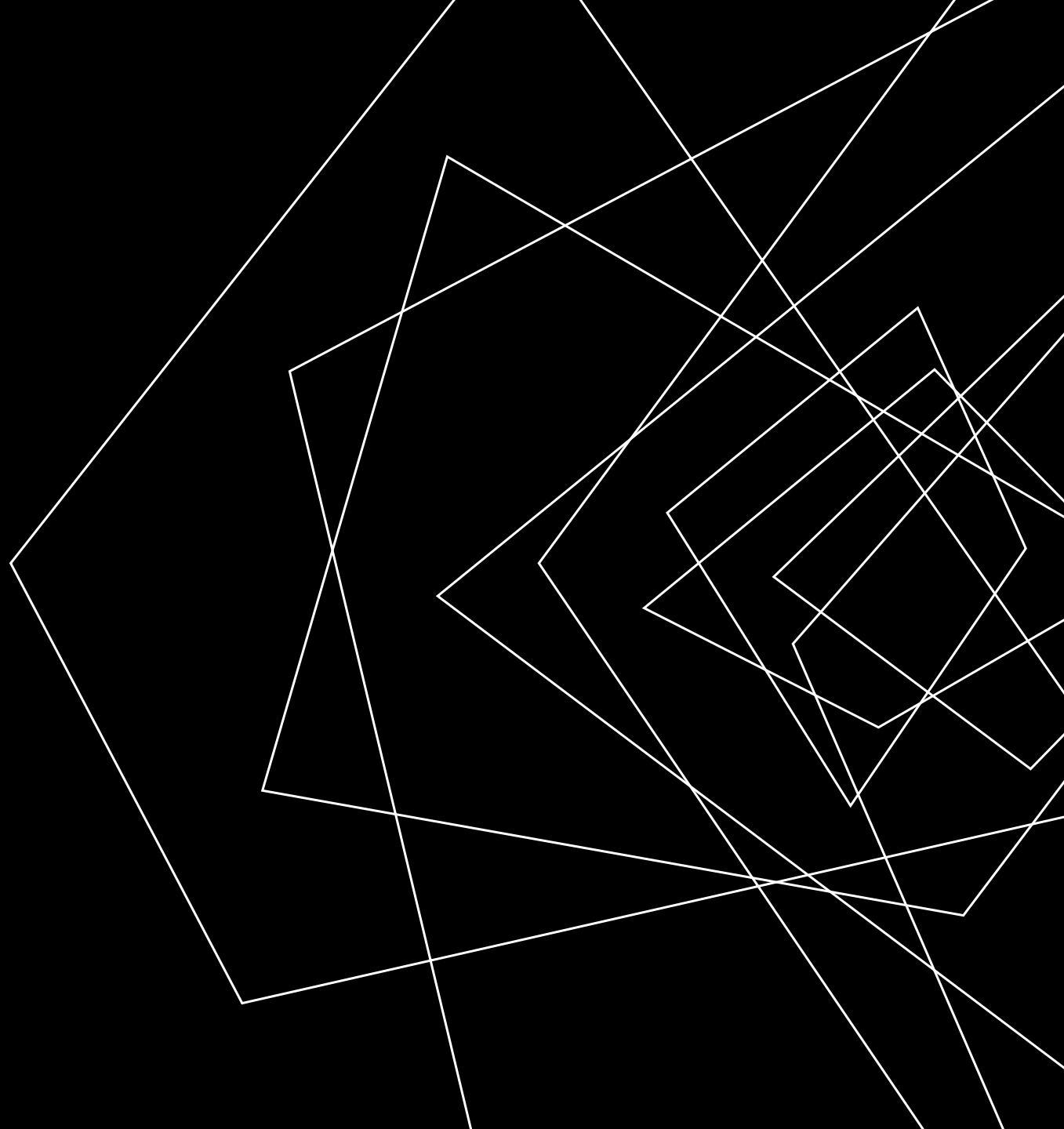


SAMPLE NAMING RULES

- Never use spaces or special characters like: !*&%
- Do use dashes (-) and underscores (_) between words or phrases
- Never change the file extension through re-naming
- Use a short descriptive file name of content and date
- Include all necessary descriptive information independent of where it is stored
- Use a standard date format: YYYYMMDD or YYYY_MM_DD
  - This date format is best for sorting digital records
- Use a consistent method for showing the file versions, such as v1 or ver1
- In some cases, it might be useful to create a file name that begins with the date so that files appear in the file directory in chronological order.
  - For example, meeting agendas: 20230607_StaffMeeting_Agenda
- BE CONSISTANT, but there will be exceptions

IMPORTANCE OF METADATA

- How do you know what an object is?
  - Metadata uniquely identifies digital objects
- How do you use content in the future?
  - Metadata makes digital objects understandable
- How do you know an object is authentic?
  - Metadata allows objects to be traced over time
- **Metadata enables long-term preservation**



OBJECT-LEVEL METADATA

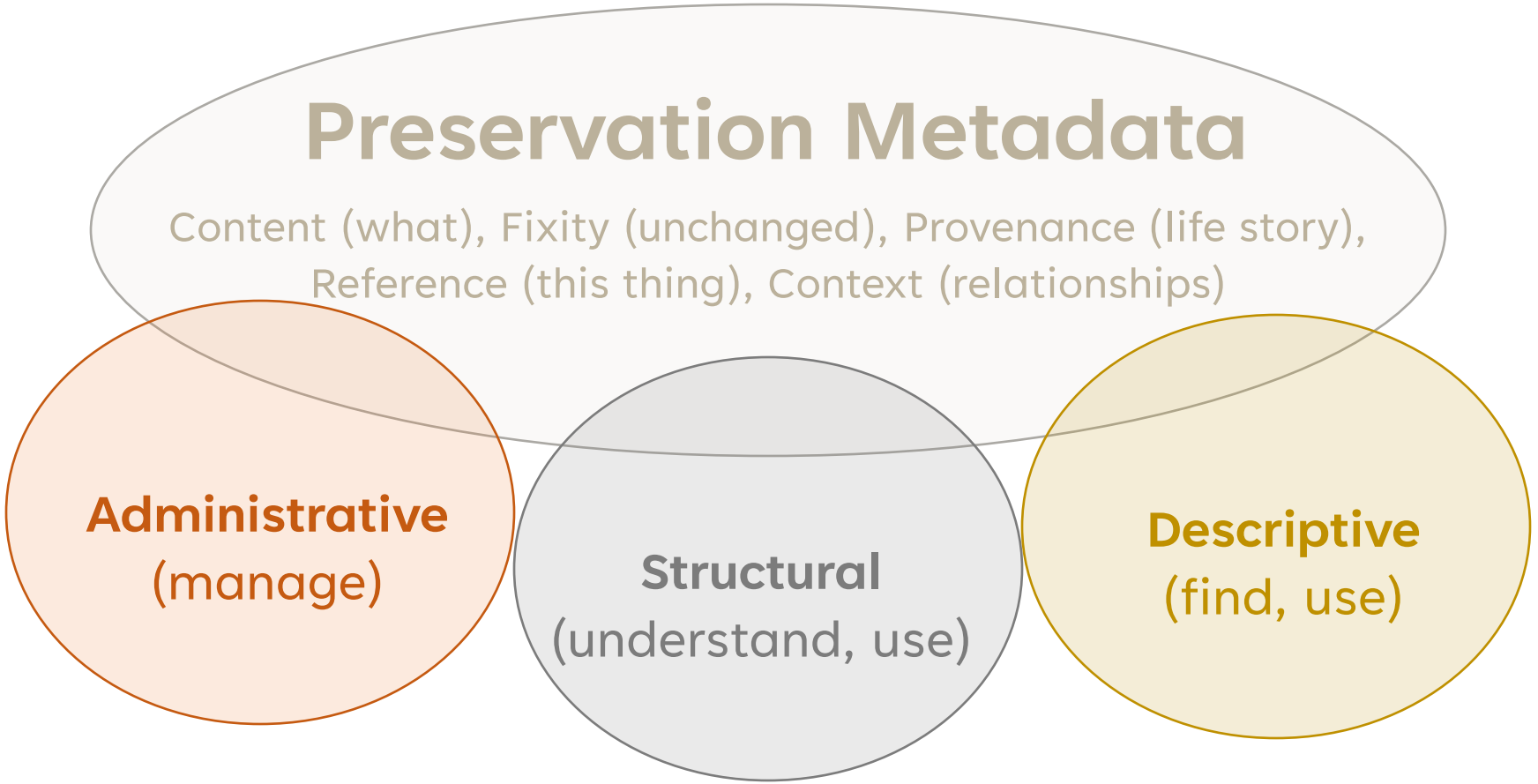


Diagram courtesy DPM Workshops

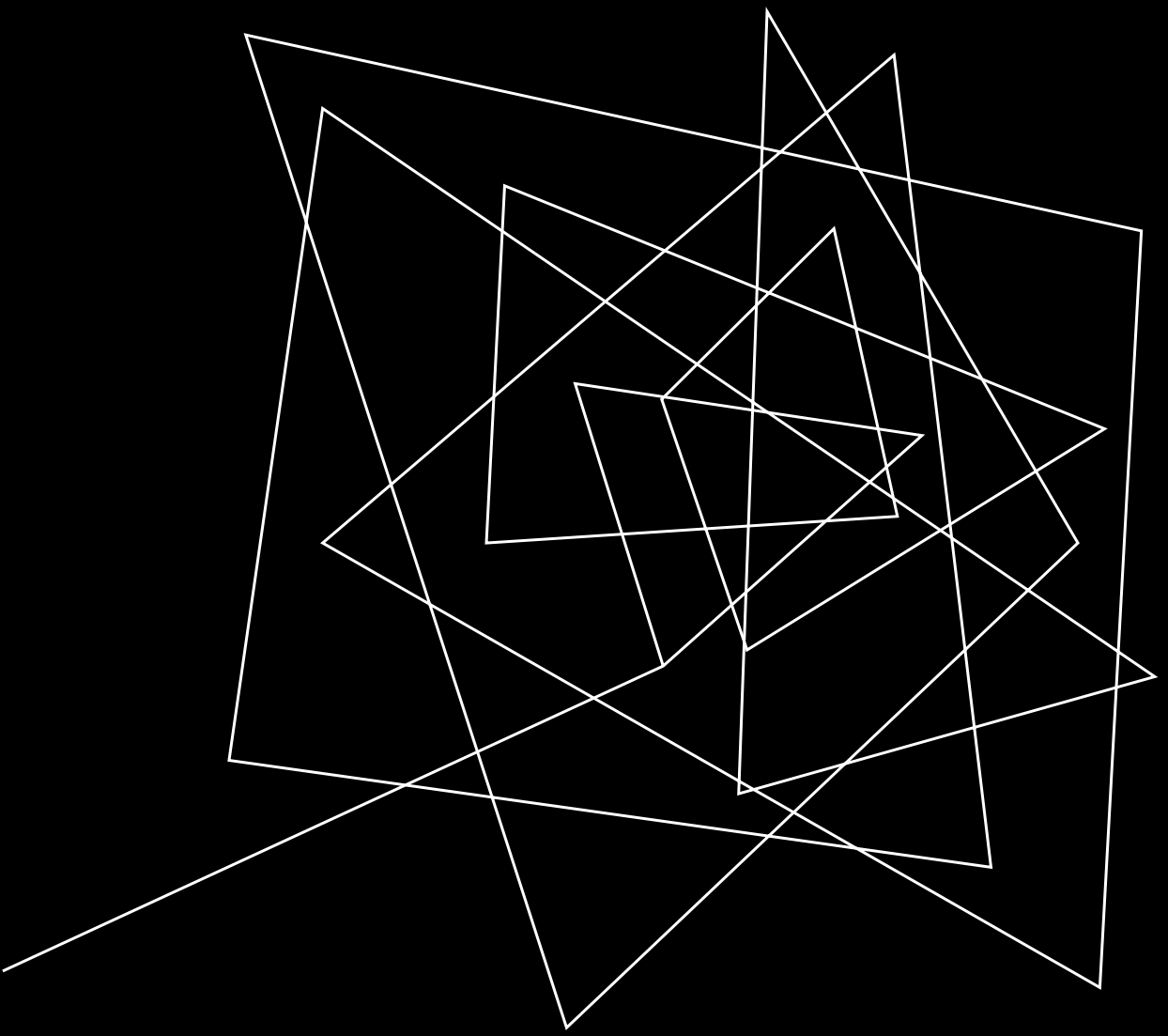
NUMBER OF COPIES

- How many copies are enough for you?
  - Minimum: two (2) copies in two locations
  - Optimum: six (6) copies
  - **LOCKSS**: Lots of copies keeps stuff safe

- Examples of storage factors:
  - Video files are too large to store 6 copies
  - Possible legal restrictions (e.g. storage locations)
  - Types of media used for storing the content

STORAGE MEDIA OPTIONS

- Content (objects) are kept on storage media
- Options include: Online, near-line, offline
- Factors for choosing options include
  - Cost (available resources for preservation)
  - Quantity (size and number of files)
  - Expertise (skills required to manage)
  - Partners (achieving geographic distribution)
  - Services (outsourcing)



EVERYDAY PROTECTION

- Know where your content is located
  - Onsite and offsite: online and offline
- Know who can have access to it
  - DP staff, IT staff, others?
- Manage authentication information
  - For staff, depositors, users
- Track and review usage then adjust practices
  - Web use, internal use and activities, maintenance

DISASTER READINESS

Proper planning should allow you to:

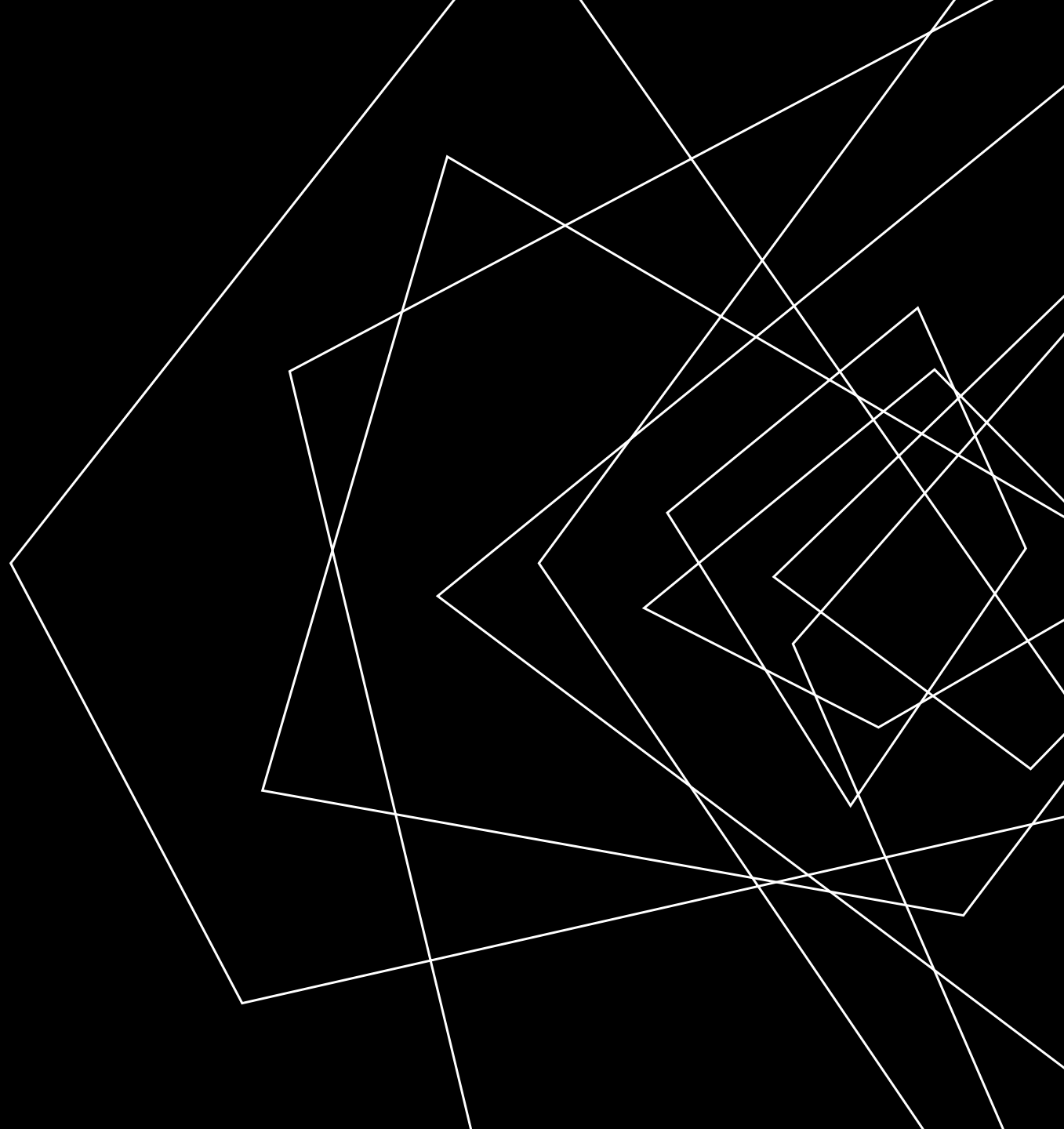
- **Prevent** – undesirable outcomes
- **Predict** – most likely risks and threats
- **Detect** – errors, problems, damages
- **Respond** – with appropriate measures
- **Repair** – damage or possible loss

RISK MANAGEMENT

- Steps to protect your content
  - Identify possible risks
  - Define those risks (nature and scope)
  - Assess potential impact (possible damage)
  - Develop appropriate, feasible responses (plans)
  - Respond to risks, threats (implement plans)

MANAGE

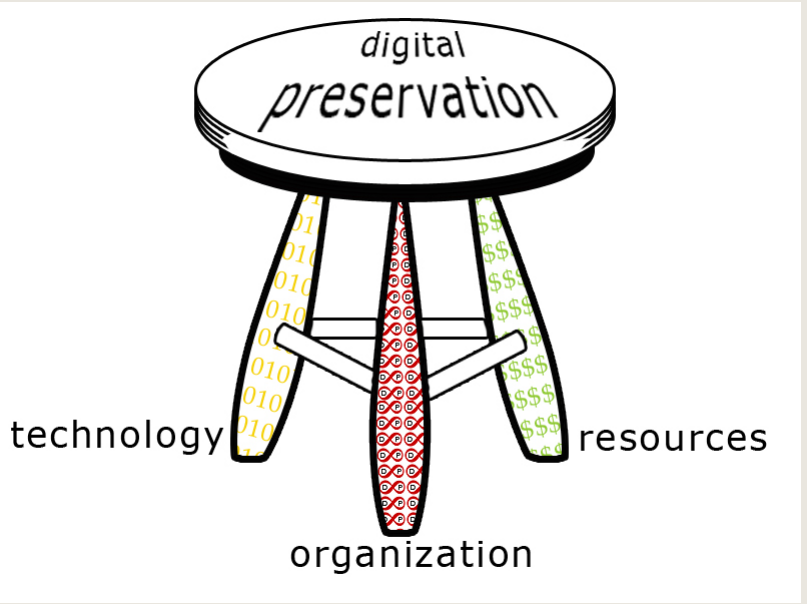
- By manage, we really mean **PLANNING**
  - Planning to tie organizations goals and assess the skills need for successful program
  - Planning to be able to assess the technology needs of your digital imaging program
  - Planning so that you have the resources (funding and staff) to support a sustainable program
- Management is important because of the **complexity** and **ongoing** nature of the problems before us.



BALANCED MANAGEMENT

An effective approach will address:

- Organizational requirements and objectives
- Technological opportunities and change
- Resources – funding, staff, equipment, etc.



Kenney and McGovern, 2003. "The Five Organizational Stages of Digital Preservation" http://www.dpworkshop.org/

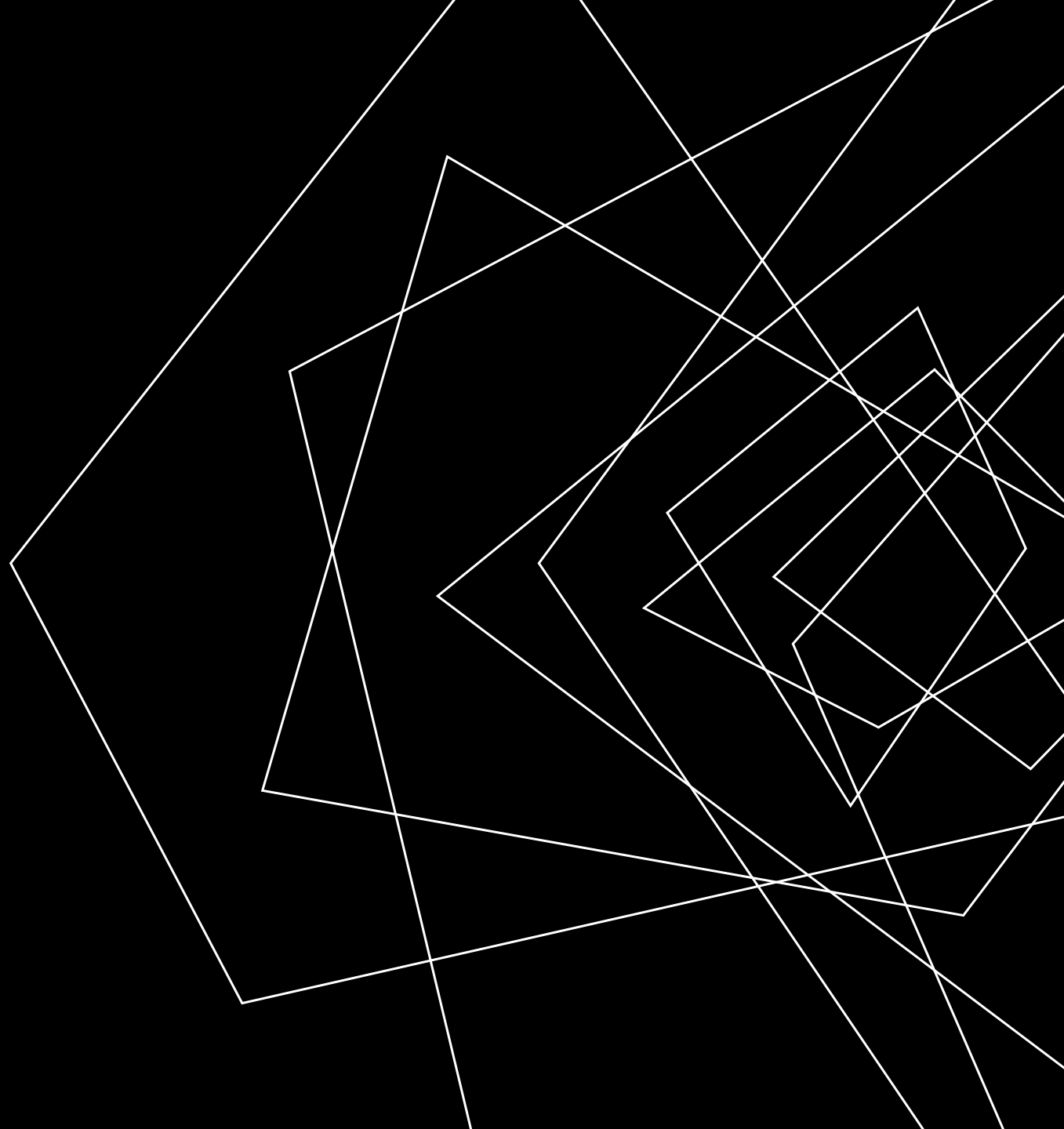
ORGANIZATIONAL ISSUES: SKILLS

Skills that might contribute to DP programs:

- Policy development
- Project management
- Repository/software management, programming
- Metadata management
- Legal expertise
- Marketing expertise
- Other?

CREATING POLICIES

- No need to reinvent the wheel
  - Number of well written policies available and online
    - I’m happy to share AHSGR’s Guidelines
  - Tailor to your organizations needs and goals
- Should address everything we have talked about today
  - Selection: How materials are chosen or priorities are set
  - Storage: DI Standards, Metadata Standards
  - Protect: Backups, preservation copies, risk management
  - Manage: Who maintains policies and when should they be revisited
  - Provide: Who has access and to what



PROVIDE

- Who is allowed to have access to content?
- Are access policies equal for all content?
- If not, how are categories managed?
- How are exceptions/special requests handled?
- How do users request/get access?
- What options (if any) do users have?
- Consider using FAQs as a step to develop policies

UNDERSTAND USERS

- May be possible to track and respond to current users – e.g., usage, user surveys – who are your users?
- How do we anticipate needs of future users?
- User expectations are driven by delivery and discovery technologies they know and want
    - - and we can't predict future technologies
- Preservation provides pathway from one generation of technology to the next
- How should digital content be packaged for delivery at specific points over time?

MANAGING LIFE CYCLE LEGAL ISSUES

- Legal issues include **copyright**, but copyright is only a portion of legal issues in DP
- Legal questions emerge throughout lifecycle … and most of us are not lawyers
- Access raises legal issues, but manage from submission (or before) throughout lifecycle
- DP requires well-formed, valid documentation
  - agreements, contracts, licenses, policies, etc.
- Good legal advice should enable well-formed evidential documentation and transparency

PRESERVATION VS. ACCESS

- Preservation OR Access
  - Early years of museum, preservation simply meant collection
  - Safest way to make sure artifact last for ever is to lock it up and make a copy for use
- Preservation AND Access
  - Mutually reinforcing ideas
  - Creating a preservation Copy with out making it possible to find the copy is a waste of money
- Preservation IS Access
  - The act of preserving makes access possible
- Preservation OF Access
  - In digital world, preservation is the action and access is the thing
  - “Preserve Access” to high quality, high value, well protected, and fully integrated version of the original

THANK YOU

Karen Keehr, Archivist

kkeehr@ahsgr.org

www.ahsgr.org