**label:** Conclusion

**title:** Considerations, Challenges and Remedies, and Recommendations

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In closing, we offer the following thoughts based on the authors’ collective experiences and those shared with us by others. They summarize salient points, common challenges and potential remedies to them, and strategic recommendations relating to heritage inventory and survey practice. Much of what follows has been discussed earlier in this volume and is simply consolidated here for the benefit of readers.

## Key Considerations

The following summarizes noteworthy points regarding heritage inventories and related surveys discussed throughout this volume.

* **Recognition of the need for heritage inventories and surveys is increasing.** Increased interest in heritage inventories and surveys has been prompted by several factors, including international trends of rapidly increasing urbanization and development, as well as climate change. Rapid advances in information technologies and increasing availability of digital information have also led heritage agencies around the world – at national, regional, and local scales – to seek accurate, up-to-date, accessible information to inform decision-making.
* **Inventories and surveys are fundamental tools for conserving heritage.** For organizations tasked with safeguarding heritage resources, the fundamental need to identify and understand the heritage they are responsible for makes inventories and surveys among their most critical tools. When they are linked to legal frameworks, statutory inventories are essential mechanisms for implementing public heritage policies, including identifying which heritage resources are officially designated or listed; which merit protection, regulation, or incentives; and which should receive formal consideration within regulatory processes. Therefore, support for inventories and surveys need to be viewed as a fundamental investment by heritage organizations.
* **Inventories are never complete.** Inventories should be viewed as ongoing records that continue to be improved over time, rather than as projects of limited duration.
* **Ongoing investments in inventories and surveys are critical to heritage management.** Investments should be made to support inventories, along with surveys and other data collection activities that feed into them, over the short, medium, and long term. Categories of required investments include dedicated personnel and capacity building, IT systems, and activities in planning, management, dissemination, and promoting public engagement.
* **Inadequate investments in inventories and surveys will undermine their effectiveness in heritage management.** To the extent that investments are not made in maintaining an inventory or supporting periodic surveys, the quality and usability of essential heritage information will likely diminish, in turn reducing the inventory’s effectiveness in safeguarding heritage. For instance, certain types of inventory information can be expected to become outdated over time, including the condition of heritage resources and even whether they still exist. The currency and usefulness of those types of information can likewise depreciate if it is not periodically updated through surveys or other data collection activities.
* **Inventories and survey activities should be integrally tied together.** Survey activities should not be viewed as ends unto themselves. The content and structure of survey data needs to be designed to feed into the associated inventory. If an inventory does not already exist to incorporate the survey’s data at the time that a survey is being planned, it is recommended that steps be taken to create such an inventory prior to or concurrently with the survey’s implementation.
* **Planning for inventories and surveys is critical to success.** For any given jurisdiction, there is a need for long-term planning to carry out multiple surveys over time and to target those activities based on the needs of the corresponding inventory.
* **Inventory and survey practices are increasingly embracing inclusive approaches.** The increasing democratization of heritage processes in many parts of the world has been reflected in shifts in inventory and survey work. In the past, such work primarily reflected professional perspectives. Now, increasingly, we see broad-ranging and inclusive participation, including from community members.
* **Inventory and survey practices are increasingly accounting for traditionally marginalized communities.** Interest is growing in much of the world in identifying and documenting the heritage of underrepresented cultural and ethnic groups and fully representing associated resources within inventories and related surveys.
* **The scope of inventories and surveys should expand as definitions of heritage broaden.** As more types of heritage are formally recognized as being significant, the breadth of inventories and surveys should expand accordingly.
* **Unified inventories can be more effective than separate topical inventories for heritage management.** Inventories can potentially be more effectively and efficiently used as tools for heritage management when they are unified for all immovable heritage types, rather than having separate inventories for different heritage types (e.g., separate inventories for architectural and archaeological heritage).
* **Thematic frameworks, thematic studies, and historic contexts are key to seeing the big picture.** Thesetoolsenable inventories and associated survey activities to distinguish the forest from the trees when identifying, describing, and evaluating heritage. Their application can be useful for comparative analysis of heritage resources and determining the degree of representativeness and potential gaps with respect to identified historic themes or contexts. They are most useful when designed to be used practically for such tasks – for instance, when their description of heritage typologies specifies accompanying character-defining and associative features for assessing integrity – and less useful when they are strictly narrative documents.
* **Information technology advances are substantially influencing the scope and methods of heritage inventories and surveys.** Rapid advances in information technologies in recent decades continue to expand the possibilities of inventories and surveys, necessitating adequate technical expertise and investments.
* **Pilot surveys can be essential prior to implementing surveys.** Because in many cases all-digital surveys are being undertaken for the first time, pilot surveys play a critical role in testing data collection technology, tools, and methods and in refining survey budgets and schedules.
* **Inventories need to be widely accessible and usable to serve multiple heritage management functions.** Accessibility and usability are key to inventory effectiveness, including serving the needs and interests of the general public.
* **Public outreach and participation are important to maximizing the effectiveness of inventories and related surveys.** Organizations administering inventories and surveys can make creative use of a range of programs and activities to reach a broad audience and start public outreach at survey project inception.

## Challenges and Potential Remedies

The following sections describe common challenges relating to heritage inventories and surveys, as well as potential remedies.

### Overcoming Organizational and Disciplinary Silos

As mentioned previously, sometimes the historical development of legal and policy frameworks results in separate heritage inventories or lists for different heritage types that could be better managed if they were integrated.

Potential remedies include:

* Assess the legislative and policy framework in place. If it is the source of siloed inventories, surveys, and related practices, determine whether unifying reforms to the framework might be beneficial. If so, design and work to implement such reforms.
* If the legislative and policy framework is the source of such silos but reform is not feasible, then explicitly recognize those issues and devise ways to overcome them, such as:
  + Forging ways to cooperate across organizations
  + Developing shared, unifying information systems and controlled vocabularies
  + Implementing an shared, interdisciplinary approach to inventory and survey practice

### Securing Long-Term Investment and Support

A primary constraint on the effectiveness of inventory and related survey programs is inadequate long-term investment of resources. Public heritage agencies generally tend to be poorly resourced, and support for such agencies has commonly been diminishing over time. In some cases, this situation can be exacerbated by a lack of awareness of organizational leadership about the fundamental importance of heritage inventories and related surveys for achieving agency mandates.

Potential remedies include:

* Measures to raise awareness of decision-makers about the essential functions and benefits of effective inventories and related data collection activities – including surveys and that inventories and surveys should be core activities of heritage organizations – and about the consequent need for ongoing investment and a dedicated program for their support.
* Pooling resources through partnerships or consortia of multiple organizations, including public, private, and academic.
* Open-source software as a cost-saving approach for inventory and related survey information systems, including through pooling resources of multiple organizations.
* Revenue generation, such as through:
  + Charging fees for more robust access to inventory databases.[[1]](#endnote-2)
  + Recovering costs for certain inventory-related services, such as agency staff time for responding to certain types of queries from commercial entities. One rate might be applied to searches requiring a standard response time, and a higher rate charged for priority searches needing a quicker response time.[[2]](#endnote-3)
* Grant funding to meet periodic or particular needs, including the initial establishment of an inventory.
* Tourism-related taxes.
* National governments may, under certain conditions, apply to the Committee for the Protection of Cultural Property in the Event of Armed Conflict for inventory and survey-related support specifically relating to preparedness for and response to armed conflict. (See **Armed Conflict** in chapter 12 for details.)

### Keeping Information Current

A constant challenge of most inventory programs is keeping information current to reflect inevitable changes in the state of places caused by both human and natural influences. At times it may also be necessary update an inventory to address broadening definitions of what heritage is deemed to be significant. Keeping information current requires ongoing activities and related investments, and it is often challenging to keep up with these costs, as annual budgets for public heritage agencies have commonly been declining over time.

Potential remedies include:

* Recognize the need for dedicated staffing to continually update information.
* Update information through periodic, targeted survey activities.
* Choose tools and workflows that maximize efficiency in data collection as well as in incorporating data into the corresponding inventory.
* Prioritize critical information for heritage protection.
* Establish linkages so that new information generated through processes external to the inventory is integrated into the inventory, such as that from impact assessments and development permitting processes (e.g., building demolition permits).
* Create partnerships among public agencies and educational or research institutions, professional organizations, and heritage NGOs. Such partnerships may lead to coordinated contributions from professionals, researchers, students, and volunteers.
* Implement mechanisms for increased public input, such as crowdsourcing.[[3]](#endnote-4)
* Utilize newly captured imagery, for example, satellite or aerial imagery or indicative information from online mapping services that provide panoramic street view imagery, such as Google Street View or KartaView.

### Keeping Up with Evolving Technology

Keeping up with rapid information technology developments can be a significant challenge when heritage organizations – often with limited resources and IT expertise – must decide whether to invest in newer software applications. Data in proprietary formats can also become unreadable if related software becomes obsolete.

Potential remedies include:

* Heritage organizations may seek to pool resources, rather than making scattered small-scale investments, to be better positioned to invest in keeping pace with rapid advancements and to gain access to IT specialists who stay abreast of and adept at implementing new technologies. This type of approach could include multiple organizations jointly investing in shared, purpose-built IT applications. One way to enable pooling of resources is to adopt open-source software, such as the Arches Heritage Data Management Platform described in **chapter 4**. The Arches HER software package is an example of one such solution. It was created based on the standards and requirements of England’s more than eighty regional and local agency historic environment records.
* Heritage organizations may wish to, whenever possible, create inventory and survey data in nonproprietary formats so that data can be read in the future without relying on particular software.
* Employing data standards can also help ensure long-term data readability and interoperability.

### Developing Inclusive Approaches to Inventory and Survey Work

As discussed throughout the book, interest is increasing in many parts of the world in identifying and documenting resources associated with ethnic and cultural histories that are currently underrepresented in inventories and surveys. A vital part of such an effort is engaging community stakeholders to work alongside heritage professionals as partners. This approach is a departure from previous surveys and inventories that relied solely on heritage experts for the most part, so new strategies are needed.

Potential remedies include:

* Consider heritage inventory and survey tools and methods that:
  + Incorporate broad-based engagement strategies, programs, and activities
  + Design inventories for ongoing community input
  + Engage the public throughout the entire survey process from survey planning to publishing data in inventories
  + Employ thematic frameworks and historic contexts as a means to help identify a comprehensive range of relevant themes and related heritage types
  + Build partnerships with a range of stakeholders
  + Take into account multilingual needs
* Consider building inventory and survey teams that:
  + Include expertise in public participation, outreach, advocacy, and community building
  + Take an interdisciplinary approach to the work
  + Engage community and topical experts as project advisors

## Recommendations

The following are concluding recommendations for improving the effectiveness of heritage inventory and survey practice.

* Heritage organizations and professionals can benefit greatly from increased sharing of inventory- and survey-related experiences and practices. This can be furthered through a variety of means, including:
  + Creating both virtual and in-person communities of practice (such as England’s HER Forum, discussed under **Inventory Communities of Practice** in the Resources sidebar in chapter 3)
  + Disseminating information through additional publications, dedicated conference sessions and workshops, and webinars
  + Developing additional case studies on a range of related topics (e.g., community participation, disaster preparedness and response, armed conflict)
* Take actions to further support inventory- and survey-related capacity building, such as:
  + Preparing and publishing inventory- and survey-related didactic materials, including case studies
  + Providing more in-depth learning regarding inventory and survey practices through university education as well as professionally oriented training
  + Offering additional internship opportunities within heritage agencies and organizations that provide inventory- and survey-related experiences
* Conduct studies to analyze differing levels of investment into public heritage inventory and survey programs to:
  + Measure the resulting impacts of investment options on the ability of public agencies to effectively carry out their heritage management mandates, and on the ability of inventories to inform development and reduce risk to developers
  + Publish resulting findings to inform public agency leadership and other decision-makers, as relevant, about return on investment in heritage inventories and surveys
  + Create and publish a methodology for conducting return on investment studies and analyses relating to heritage inventories and surveys

The authors hope that these conclusions and recommendations can help promote additional dialogue and collaboration among organizations and professionals working with heritage inventories and surveys, spur the creation of additional resources and learning opportunities to improve the effectiveness of practice, and ultimately further protect significant cultural heritage around the world.

1. . As an example, as discussed under **Fiscal Support** in the Resources sidebar in chapter 3, AZSITE, Arizona’s Cultural Resource Inventory website, offers annual database access subscriptions at tiered pricing rates based upon the number of users and type of user organization. See <https://azsite3.asurite.ad.asu.edu/azsite/forms.html>. [↑](#endnote-ref-2)
2. . Historic England has made available a model historic environment record (HER) access and charging policy for use by England’s more than eighty local government authority inventories that includes options for cost-recovery charging of this sort. See **Fiscal Support** in chapter 3’s Resources sidebar for details. [↑](#endnote-ref-3)
3. . As an example of crowdsourced information, see Historypin (<https://www.historypin.org/en/>) an online, user-generated archive of historical photos, audio recordings, videos, and personal recollections. Users can use the location and date of their content to “pin” it to Google Maps. [↑](#endnote-ref-4)