

*Making Your Tools Work for You: Building and Maintaining an Integrated Technical Ecosystem for Digital Archives and Libraries.* By Max Eckard. Chicago: Society of American Archivists, 2020. 337 pp. Softcover. \$55.00.

I encountered Max Eckard's *Making Your Tools Work for You: Building and Maintaining an Integrated Technical Ecosystem for Digital Archives and Libraries* at the tail end of a drawn-out migration to an open-source system, with time, patience, and resources running short. Rather than (merely) serving as a distraction to the many tasks at hand, the book provided useful conceptual language to communicate goals and rationales for this migration, as well as ideas for next steps to integrate the new system with other library and archival tools. While we could have used the knowledge it imparts earlier in the process, it will continue to serve as a resource at my place of work, and I would recommend it to archivists attempting to use technology more effectively and technologists seeking to better serve archivists.

Eckard, whose work at the University of Michigan Bentley Historical Library and professional service on committees such as the ArchivesSpace Technical Advisory Committee establishes his *bona fides* and informs his approach, includes clear definitions (repeated in a glossary), examples from his own and others' software integration projects, thoughtful discussion questions, and extensive endnotes with each chapter. Most of the endnotes lead to citations (also listed in a bibliography), but I wished that those containing conversational asides had been integrated into the text itself as they supplied useful insights, the discovery of which meant that I felt compelled to flip to the endnotes as I read.

The book devotes an entire chapter to five case studies from a variety of institution types and sizes, but Eckard emphasizes the need to understand and articulate the goals—typically faster, more accurate archival accessioning, discovery, and/or digital preservation workflows—before selecting the specific technologies used to achieve them. As he puts it, “Systems come before systems integrations, and workflows have to be established before they can be optimized” (p. 144).

In chapters focused on the conceptual underpinnings of “a functional coupling between software applications to act as a coordinated whole” (p. 4), Eckard characterizes vertical, horizontal, hub-and-spoke, and point-to-point integrations, and delineates methodologies such as common metadata standards, data interoperability protocols, application program interfaces (APIs), and command line interfaces. Getting a better handle on these options could lead to improved communication between the archivist proposing an improved workflow and the information technology specialist setting it up, as can the introduction to project management offered in another chapter.

A chapter entitled “Can We Talk About Your Messy Metadata?” resonated most strongly with me in light of my current system migration, during which metadata (and, I might add, file name) restructuring and standardization has been a laborious task, but a tool mentioned by Eckard, OpenRefine, and one called Bulk Rename Utility have eased the burden and reduced human error. As I also attempt to ensure that links to ArchivesSpace from an item's metadata replace duplicative but often outdated collection

descriptions within the digital collections site, Eckard's explanation of the need for an authoritative data source articulates and validates my efforts.

A chapter introducing why and how to use the Python programming language in archival systems integration work at times felt intimidating (as have brief workshops I have attended on the same topic). Eckard very sensibly recommends learning coding by using real-world examples rather than canned exercises, so the "why" aspects of the chapter make it worth digesting.

Integrations can be iterative, with each step removing or replacing a cumbersome or manual process. The advice to "Cultivate a realistic and manageable, as well as iterative and dynamic and, above all, incremental, definition of done" (p. 55) serves as a helpful reminder to stay focused on what you need the technology to accomplish and to be willing to backtrack, tweak, or wrap up (perhaps to revisit later) as appropriate. The integrated technical ecosystem also requires maintenance, which should be accommodated in budgets and workplans, and not supplanted by funneling those resources toward the next technological innovation that promises to do it all.

A few months before reading this book, I attended the National Digital Stewardship Alliance's Digital Preservation 2021 virtual conference (<https://ndsa.org/conference/digital-preservation-2021>). In a talk entitled "How Do We Build Long-Term Infrastructure When Funding Is Uncertain?," panelist Margo Padilla astutely declared, "Digital preservation is people." (Bonus points if you recognize the *Soylent Green* reference.) Max Eckard makes a similar point in his concluding chapter when he states, "The tools we use are really just proxies for the people who use them—both internal and external, and past, current, and future—and the needs they have. Systems integration implies integration of people and their workflows just as much as it implies integration of systems" (p. 290). This book serves a useful role by addressing the full scope of considerations, human and technical, involved in an archival technical ecosystem.

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