Technology Project Management
Best Practices
For Jewish Funders & Nonprofits

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About the author

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Greg contributes to an Open Source echography project and develops Google Chrome extensions in his spare time. He is based in Montreal, and is fluent in French, Russian, and English. His interests include data wrangling and robotics. Greg is proud to have done many nonprofit projects for countless organizations including: Birthright, Idealist, Musicians On Call, and echOpen to name a few.

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Introduction

Organizations that don’t remain current with digital tools, processes, and trends become outdated as quickly as those technologies evolve. Given the permeating and ever-increasing role of technology in people’s daily lives, organizations need an outline of best practices for digital capacity building and strategies.

Whether public, private, philanthropic, or nonprofit, all organizations need comprehensive information technology (IT) infrastructure and corresponding strategic plans in order to fully engage with other players in today’s world. When organizations don’t have an online presence or use current digital tools and platforms, they are missing out. And not just in terms of efficiency—they may even be missing parts of, or entire, conversations in their field. For a nonprofit organization, this leads to missed opportunities and reduced relevance.

The sheer number of technological products available today makes decisions about technology challenging, to say the least. Are our existing IT infrastructures current? Effective? Efficient? Could we achieve more using different products? How do we decide which products to use? How do we make these products work within a larger strategic plan?

This document provides leaders and professionals in the philanthropic and nonprofit fields with foundational understanding of practical tools with which to make improved decisions about technology choices. Foundations may find it useful for their own operations. Funders of any size and configuration may find it a useful resource to share with nonprofit grantees. Using the tools and frameworks presented in this document, organizations should benefit from increased productivity, and, ultimately, greater impact.
Your Organization and Technology

Building a Case for Technology

As part of the broader pattern of underinvestment in organizational capacity, it isn’t uncommon for nonprofit organizations to lack IT expertise. Without in-house IT expertise, technology is often viewed as being limited to communication objectives. But technology can and should be woven into all organizational objectives and work plans. It’s unlikely that this can be achieved without a common organizational understanding and culture of technology. It’s therefore crucial to begin by addressing the current state of technology as a key component of your organization.

How does your organization, at the individual level, perceive technology? Are staff and volunteers well informed of current products and tools? Which products are they familiar with? How do they use those products? Are they informed on, and do they make use of, the full range of functionality for each product they use? Do they stay current with the ongoing developments of those products? Do they demonstrate the benefits of the use of those products to other staff and volunteers? If so, do they also teach others on how to use those tools themselves? Does your staff have regular and frequent discussions about technology and how it can contribute to the mission of the organization? Could your staff reduce workload by using new or different technological products? As a starting point and at a minimum, these are all questions you should be asking yourself if you are committed to adequately integrating gainful use of current technology into your organization.

At a broader level, how does technology fit into your overarching goals and strategies? Does your use of technology simplify and promote funding, planning, governance and other objectives, or is technology used strictly for communications purposes? Is your organization using technology as a means to increase and maintain visibility? Increase partnerships? Increase funding? Collect funding? Are you using technology to facilitate the “user experience” of members, grantees, funders, partners, and other constituents? Does your organization offer unique products or services that result from creative uses of technology?

All levels of your organization—your board, management, staff, membership and volunteers—should have meaningful and substantial conversations about where your organization currently stands in its use of technology, where it wants to be, and how to move forward in achieving that vision.
Some questions to facilitate that broader conversation: What role does technology play in the life of your organization? Does it fuel one or some of its systems/components? Does it facilitate communication between some or all of its systems/components? Does it flow through all systems/components? How can your systems/components be stronger and more precisely targeted toward achieving your mission?

We cannot overstate that building a case for technology within your organization is the first step to realistically moving forward with a feasible plan to integrate current technological products into the organization's "DNA". Your organization as a whole needs to be on board and to truly believe in the value of getting up to speed and remaining current with the use of technology. This holds true across all levels—board, management, and staff. If your people don’t buy it, systems and products themselves simply won’t transform into anything concrete. In neglecting to purposely “on-board” your organization to the value of technology, you run the risk of stagnating in outdated or ineffective processes, no matter the quality of your products.

**Education**

One of the ways to shape your organizational culture is through education. Encourage, support, and facilitate the ongoing learning of the people who comprise your organization. How do you do this?

**EDUCATIONAL RESOURCES**

There are countless courses, workshops, certificates, tutorials and other training activities available for you to stay current on technological products and how to benefit from their use.

**A few recommendations**

Class Central aggregates online courses across multiple provides; most courses come from top universities and are available for free. Searching for "Digital Marketing" or "Social Marketing" will point you to a number of them that will help you get familiar with modern ways of disseminating information and reaching out through modern means.

[www.class-central.com](http://www.class-central.com)

"The Beginner's Guide to SEO" will help you understand how search engines operate, and what steps you can take to influence the position of your website in search engine results.

[moz.com/beginners-guide-to-seo](http://moz.com/beginners-guide-to-seo)
You can and should encourage your volunteers and staff to participate in technology training activities on an ongoing basis. This will not only help improve their use of technological tools but will also deepen their understanding of its added value, meanwhile provoking thought on how to move forward with and make the best possible use of the most recent technological developments.

Make it a part of regular operational activities: incorporate a 15-20 minute “read a blog about technology” item into daily or weekly tasks. Build a 10-minute “demonstrate a new tool” into a regular meeting’s agenda. Be prepared for these steps to lead to new ideas for implementing new technology. Use new and better tools to accomplish tasks. Buy the software, hardware, subscriptions, and all other things you need to help your staff and volunteers succeed more efficiently. Then, throw a Friday afternoon pre-Shabbat party to celebrate the efficiencies you’ve gained. Celebrating success will cement the culture of innovation.

Promote ongoing training in recent technology products as part of your professional development plan for staff, and build it into volunteer and membership events. Send your entire staff to training on how to use technology products. Why send everyone? Every person within an organization can do their job better with the right knowledge of which tools to use how to use those tools gainfully.

The return you will get from these investments will undoubtedly contribute to a more sustainable future for your organization.

Disseminating information is just as important. Build a plan that allows for staff and volunteers to regularly and consistently learn from each other and your organization will diversify its skill set. The more people within your organization that are familiar with and comfortable using technology, the more capable your organization will become.
IT Projects

IT projects come in varying shapes and sizes: overhauls of institutional IT infrastructures; launching a new website for your organization or a specialized site for a campaign; launching an intranet to collaborate on daily operations; creating a searchable database of documents to be used internally, externally or both; developing a communications tool to reach interested parties through a variety of online channels; mounting a social media campaign; creating a mobile application; or migrating existing hardware systems to a cloud infrastructure, to name a few.

Each project is unique, since its needs are specific to the organization and since each project calls for certain types of tools. IT projects involve different types of expertise and usually require some form of collaboration, which calls for a project management approach in which project charters are developed jointly between all involved parties.

Embracing on IT Project Management

Managing IT projects can feel frustrating. Here are some common pitfalls related to IT projects:

• At the planning stage, it is just as easy to underestimate the complexity of some product specifications (e.g., “and we want it to work on mobile phones”, “and it also should have a search engine”, “and it should work without being connected to the Internet”) as it is easy to spend too much time planning.

• Once the project has started, every moment will seem favorable to add “just one more feature” or change “just one tiny thing”. Any change, however, will add delay and might require changing the whole structure of the project, pushing back the deliverable in time. This is but one scenario that can lead to lower morale.
Feelings of powerlessness often accompany building something virtual and abstract which exists only as bits stored in computer memory. Those frustrations are most powerful before things begin to work. When building a large physical object, progress is visible long before completion. With IT projects, however, progress can be assessed theoretically, but is difficult to apprehend on a gut level.

Having overseen to completion a number of IT projects, we would like to share a few avenues to reduce and eliminate the uneasy feeling that they can sometimes evoke.

Defining the Project

Less is more applies to IT project management just as much as it does to other fields.

In 2009, Eric Ries popularized the notion of a Minimum Viable Product (MVP), which made major inroads in IT circles. Ries was mainly addressing startup entrepreneurs, but his definition (and, generally, his focus on fast, iterative development) is of tremendous value to anyone involved in IT project management.

The Ries definition of an MVP reads as "that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort". It introduces the notion of a product having a minimum "viable" number of features. This is the least featureful, least "powerful" version of your project.

Why bother building something underpowered and under-featured? IT project management benefits from short iterative cycles, in which at every cycle you "build, test, release." Without delving into discussions of project management methodologies, we will note that most modern IT organizations have put in place a set of practices that makes work advance in small increments, adding features and fixing problems in the course of weekly sprints. (For those wanting to dig deeper, head over to Class Central and look for "Project Management" courses in general, and introductions to the "Agile" methodology in particular).

Shorter cycles give you the ability to release an initial version, and further versions, of a project much more quickly. Note that your project can be "released" internally at first and does not necessarily have to be shared with the public at large. The main idea is to get out of planning mode and, as Ries’s definition puts it, "to collect the maximum amount of validated learning", i.e. to learn about real outstanding issues, to draw conclusions from those to decide what to do next, and to act upon those conclusions.

Short development cycles will also help you focus on the most important tasks at hand and get in the habit of being as specific as you can about the work to be done. This is a useful habit as it will allow you to take on the perspective of the people implementing the technical work. (Those interested in getting a better understanding of software development should take a look at Harvard’s "Introduction to Computer Science" course available for free on edX).

2 https://www.edx.org/course/introduction-computer-science-harvardx-cs50x
To give a specific example, imagine that a new web site requires features defined as a "user account system" and a "system allowing the organizations' staff to manage web page content". As the person responsible for detailing the work to be done and/or the person overseeing the implementation of these sample requests, many questions should spring to your mind (it always helps to "Assume Nothing" and to be as specific as possible):

Are we implementing a new user management system, or will we integrate with an existing authentication system, such as Google’s? If we are to implement a system ourselves, where will it be hosted? What database will we use? How will passwords be stored? Will there be an enforced policy for password strength? Will all or some of the web pages be served over a secure connection to the users' browsers? Will our staff have specific roles (such as editor or administrator) allowing them to act in different ways on the site? Will one or many users have full permissions over the system? Can privileges be revoked? By whom? Will logs of any operations relating to adding, editing or removing users be kept? Can content web pages be edited by any user? Or only by its author? Or by admins? Should previous versions of the pages’ content be kept?

This is not an exhaustive list of relevant questions, and we don’t dwell on them in order to provoke an allergic reaction. Rather, it is important to see that for every simple directive ("we should have user accounts"), many questions need to be extracted and detailed. It is not necessary to have answers to all such questions ready ahead of time, but it is important to realize the extent of implementation "details" for most requests, even seemingly simple ones. Having a better and more detailed understanding of the tasks at hand helps plan sub- and sub-sub-tasks, to prioritize them, and to oversee their completion at an atomic level, which is more representative of the actual way the work will be done. The people responsible for doing the work will be grateful for your ability to adapt toward their way of working.

**Bringing in Outside Vendors**

You will have to decide, usually early on, whether to bring in external help to complete your IT project. In the nonprofit context, the extent and limitations of the organization’s existing IT capacity need to be assessed as thoroughly as possible during the planning stages, so that grants and other revenue streams funding the project can be budgeted accordingly. But funders and nonprofits alike should understand that IT projects can’t be planned out with precision before beginning them, since so much of the learning and progress is iterative. Funders supporting nonprofit IT capacity will be most successful if they adopt flexible expectations for an agile IT learning process.

As a general rule, you should first attempt to do as much as you and your organization can do on your own, and plan for outside vendors to come in after your internal capacity is exhausted, if at all. One approach might be to break down your project into smaller sub-projects, and get the initial, smaller ones done first using existing resources or new tools. We recommend this approach in order to quickly learn as many as possible of the lessons that will stem from actually
using the application or system. Moving quickly from planning to implementation, you will learn realities and needs of the project that could not have been predicted during planning. You may plan five features and find out that one of them takes twice as much time to implement as the other four together. You may learn that the easiest feature to implement is the one that's appreciated most by your system's users. Gaining a better understanding of the reality of using your system will make your organization more effective and allow you to pursue directions that have the highest ratio of reward to effort.

This being said, you will need to bring in external resources if and when a project requires help in domains for which your organization lacks the necessary expertise—software developers, designers, social media managers, and usability experts, to name a few, can be brought in on a temporary or permanent basis.

It is usually worth exploring both the “Do It Yourself” and the “Do It Yourself With Some Help” approaches. Reaching out directly to freelancers, or agencies that represent a number of them, should allow you to get an estimate of the time and budget necessary to complete a feature, or the whole project. Reach out to experienced professionals who have a track record of delivering projects for other organizations. Attempts to go with the lowest bidder usually end up costing more money and taking more time, since tasks you deemed to have been completed may require continual fixes, or complete reworking. The choice of an IT professional should be made with as much care as choosing the most competent medical or legal help.

Walled Gardens

Irrespective of your choice to use a tool you are already familiar with, adopt a new tool, or bring in external help to help realize your project, you will want to make sure that the information (the data) your system will be storing can be exported at all times. Reasons for exporting your data include making regular backup copies and retaining the ability to move to another technology provider. But, most importantly, data is probably the most crucial part of any project.

The notion of a “walled garden” in technology refers, among other things, to systems from which data is either difficult or impossible to export. This in effect means your data is held hostage, a situation which you should try to avoid.

When choosing a tool, or working with partners, find out how easy it is to get access to a copy of all of the stored data, and how easy it is to migrate from any chosen provider to another. Most modern, well-known tools and service providers allow it; do everything feasible to avoid a situation in which the tools you choose keep your data away from you behind an insurmountable wall.
New Architecture vs Old Architecture

As more organizations have moved online these last few years, many new providers have started offering specialized services to these businesses. There are now more companies than ever helping businesses with their online payments, fundraising, ecommerce stores, website hosting, email hosting, newsletters, and more.

There are a few ways to name this phenomenon: one of the acronyms you might encounter is “SaaS”, or Software as a Service. Generally speaking, SaaS businesses offer a specialized offering for a monthly or yearly price. In effect, your organization ends up renting, or licensing, a service for a specified period. SaaS businesses usually offer a number of subscription plans, depending on the level of use of their services.

SaaS offerings have changed the way that most organizations deal with the online world. It is now common to setup an online ecommerce store using an "e-store as a service" provider instead of building a store from scratch. What might have represented an enormous undertaking years ago can now be replaced by a 29$/month subscription plan with no commitment.

This "New Architecture" represents a way forward. Although your organization will depend on external services (as it already does with its Internet and telecommunications providers), it will benefit from not having to create and maintain systems which are unrelated to your area of focus. It is only but a few exceptional organizations who should run their own email servers; this is especially the case when Google, who runs Gmail, can run yours. And it’s especially true for nonprofits, which, in the specific case of Google, can get their services for free.3

3 See https://www.google.com/nonprofits/products/apps-for-nonprofits.html

Navigating an IT Project Timeline

The following question list will come in handy as a quick reference during the every stage of your project:

**PROJECT DEFINITION: FROM IDEAS TO SPECS**

1. What is your project about?

2. Could you define it to be about something smaller? Can you break it down into sub-projects?
   - A smaller project will be easier to achieve, and will increase the chances of being completed under budget and ahead of schedule. Small projects can be great successes too.

3. What is the “business” (or social) case for the project?
4. Do you have all relevant process documentation?
   • Which processes related to this project are unique to your organization? Can you define them in step-by-step fashion?

5. Do you have all relevant technical documentation?
   • Will your project integrate with existing systems? Who is responsible for them?
   • What tools or external services will your project use or be based on?

6. Do you have a specification document / product requirements document?
   • The document should list your project’s features and be as specific as possible. It is best to "assume nothing" and to be as detailed as possible.
   • Do you have a rough timeline estimate for the project from your internal discussions and those with external partners?
   • Can you estimate a budget based on your timeline and the necessary resources?

TECHNICAL AND HUMAN RESOURCES

7. Will the project be done using internal resources only?
   • Can you break down your project in order to complete the first steps by yourself?

8. Will you be bringing in external help to complete the project?
   • Establish a single point of contact at your organization to facilitate communications.
   • Refer to the "How to Hire Contract Tech Talent" guide to learn how to find the right freelancers.

PROJECT MANAGEMENT

9. Who at your organization will be responsible for managing the project?

10. How will you keep the project on track?
    • Will you have regular / scheduled check-ins? Who will take part in them?

11. What tools will you use to track the project’s progress and any issues that arise?

12. How will you track change requests to the project’s features ("scope changes")?
    • What new features will make it into your project, and which will be pushed to the next iteration (or version) of your project?

4 https://www.10xmanagement.com/how-to-hire-contract-tech-talent-ebook-is-here/
**DELIVERABLES**

13. Does your project follow security best practices?
   - How do you handle user credentials and passwords?
   - Do you restrict all communications to secure channels?
   - Who is responsible for hosting your infrastructure?

14. Will the deliverable include documentation or training?

15. Will you always be able to export data from the systems you create or use?

16. Do you have an automated backup system in place?
   - Is your system redundant?
   - Are backup failures monitored? Will you receive an alert?
   - Have you tested it?
   - Have you tested the recovery process?

17. Do you have access to all programming source code related to the project?

**SUPPORT**

18. How will you monitor that your project works on an ongoing basis?

19. How will you track issues that arise after your project has been delivered?
Appendix

Useful Tools

There are many powerful online tools that allow organizations to meet their existing needs. In this appendix, we have prioritized tools that are easy to use and whose cost is either free or inexpensive (a few hundred dollars per year at most). More featureful versions of these tools exist; however, for small (one-off or recurring) projects, it’s worth exploring the possibility of trying to complete a project sooner and by yourself. The short term goal of any small project should be to get to a result and share or promote it as quickly as possible (internally or with the public at large). It will be better to iterate on a completed project using real-world feedback than to make bigger and better plans that don’t come to fruition. Keep it simple.

CONFERENCE MANAGEMENT

Event organization: Eventbrite
Covers most event organization needs. Free to use if you’re organizing a free event. Inexpensive to use if you are selling tickets to events. Eventbrite has a special rate for nonprofits.
• eventbrite.com

Badge printing: Conference Badge
Simplifies conference badge printing. Has direct integration with Eventbrite so that you can import your attendees in a few clicks. You can print badges yourself, or have them shipped to you.
• conferencebadge.com

WEBSITES

Website building: Wordpress
Create a straightforward web site with pages and blog posts in a few minutes using this venerable tool. Wordpress offers a staggering amount of flexibility and offers free hosting to get you started. A few alternatives: Squarespace, Wix.
• wordress.com
• squarespace.com
• wix.com
Ecommerce: Shopify

Allows you to create an online store to sell physical products. The result will be secure, look professional, and make purchasing easy. Setting up a new store can take a bit of time, but is not hard to do.

• shopify.com

COLLABORATIVE WORK

Project Management: Basecamp

Overseeing a project involves managing lists of tasks and discussing the issues with internal and external collaborators. Basecamp is a solid, simple-to-use tool that makes this process easy. There are many project management tools (and methodologies); Basecamp is probably one of the most straightforward systems to use. See your project as a list of to-do items, discuss and prioritize, then complete them.

• basecamp.com

General Purpose Collaboration: Google Sheets and Google Docs

These free tools from Google allow you to collaboratively work on text and spreadsheet documents. Working together on the same document instead of emailing it back and forth saves time and ensures that everyone is working on the latest version.

• google.com/sheets/about
• google.com/docs/about

CREATING AND SHARING CONTENT

Surveys: Google Forms

One of the simplest solutions to create a custom form. Need to survey a few (or a lot of) people using multi-choice or open ended questions? Create a form, then look at the responses in a Google Sheets document that can easily be shared amongst colleagues.

• google.com/forms/about

Mapping: Google My Maps

Create maps to which you can add custom points and shapes. This free tool is ideal to create a map displaying points of interest, a delimited area, a path to follow, etc. Maps can be shared with and collaborated upon by many people at once.

• google.com/maps/about/mymaps
Email campaigns: Mailchimp
Makes it easy to send nice looking newsletters which won’t land in your recipients’ Spam folders. Great selection of free templates and valuable reports, allowing you to see who opened your emails, which links were clicked and by whom.
• mailchimp.com

UTILITIES
Backup and file exchange: Dropbox
It is absolutely essential to have at least one remote system in place to store a copy of your organization’s files (having two is even better). Having an automated system is critical; needing to remember to do a backup almost guarantees that you will experience a “perfect storm” of information loss.
Dropbox simplifies backups and lets you easily share selected files with colleagues and people outside of your organization. You can get started for free with a reasonable amount of disk space; by buying a Dropbox Business subscription plan, you’ll get a lot more space (Dropbox boasts of offering unlimited storage). Business plans also get “extended version history” which will allow you to recover all previous versions of any file edited within the last year.
Google Drive is another cloud storage alternative.
• dropbox.com
• google.com/drive

INTERCONNECTING TOOLS
ifttt and Zapier
These “extra” tools will allow you to create advanced automated workflows. Examples include saving new email attachments into Dropbox or posting to Facebook any new video added to your YouTube channel.
• ifttt.com
• zapier.com
ABOUT JEWISH FUNDERS NETWORK

Jewish Funders Network brings Jewish philanthropists together to learn, connect, collaborate, and maximize their impact. JFN members harness the power of networks to make Jewish giving better. Learn more at jfunders.org.

Contact: jfn@jfunders.org or 212.726.0177
jfunders.org

ABOUT 10X MANAGEMENT

10x exists for one reason, to revolutionize working with tech freelancers; matching the most talented people with the most innovative companies. 10x rigorously vets their technical talent so their customers don’t have to. It’s a hassle free process that produces 10x results as evidenced by their wide range of customers. 10x works with all size companies, from startups (Wheels Up, Yelp, etc), to non profits (MIT, Idealist.org, Stanford, Birthright, etc) as well as large enterprise companies (Verizon, BMW, Genentech, etc.).

Contact 10x: info@10xmanagement.com or 212.501.0748
10xmanagement.com