

Dear friends,

I'm delighted to share that the Bahá'í Library Online is finally being redeveloped, and we are raising funds for it. This is our first call for donations since the project started in 1997. Details are below: first an introduction, followed by Ismael's technical summary.

For the previous 26 years, this website has been essentially a one-person operation (though with dozens of people contributing over the years, a few of whom donated 100s of hours). But it has minimal features, old programming, is not scalable, and does not work on mobile devices.

Two years ago we assembled a large group of advisors, with the goal of expanding the site and bringing it up to contemporary web standards and with proper library-science features. Senior software engineer Ismael Velasco, founder of the Adora Foundation, spent much of that time working with other programmers to prepare for this redevelopment.

Ismael unexpectedly found himself with a window of full-time availability, and all our pieces are in place to begin the project in earnest.

While previous work was all-volunteer and most future work will also be volunteer-driven, this rebuild requires the highest-level expertise in current software and cloud technology, which unavoidably requires a paid commitment. Ismael is uniquely suited for this role, has been actively preparing for it for two years, and is single-handedly doing the initial programming.

We are seeking to raise another US \$4,800 in the next two weeks, which will be paid to Ismael; we're already 2/3 of our way to the total \$12,500 goal. This cost is reasonable, expected, and necessary.

Any excess funds that might come in will be used later this year, for hiring developers to add features and designers to create a mobile version and a modern desktop interface. There are many upgrades on our to-do list, which will take place in the near future, after Ismael's rebuild of the foundation is complete.

I must emphasize one point: This library is a private, independent project. It is not affiliated with and not endorsed by any Bahá'í body or institution. This endeavor is completely independent of any institutional Bahá'í fund.

We advise using wise.com, which has the lowest fees of any transfer service.

Donations can be sent via wise.com by using the email address:

bahai.library.com@gmail.com.

We can also accept funds via PayPal via the email bahai.library.com@gmail.com (do not use the nonspecific name "Jonah Winters" — it must be sent to our unique email address).

We can also accept direct bank transfers; email us for the details.

On the next pages is Ismael's summary of the project.

More information can be found in "Bahá'í Library Online at 25: Background, Functioning, and Future" at www.bahai-library.com/winters_bahai_library_25.

With great appreciation,

Jonah Winters, on behalf of Bahá'í Library Online

OVERVIEW OF PROJECT

BY SOFTWARE ENGINEER ISMAEL VELASCO

Total Fundraising target: **US \$12,500**

Raised: **\$7,700**

Needed: **\$4,800**

SCOPE OF PROJECT

An intensive, 5-week rebuild and migration of bahai-library.com from a fragile, insecure legacy app approaching its limits, to a modern, cloud native, scalable, secure, environmentally friendly, and future-proofed application.

The new version will initially look and feel the same as the old, but behind the scenes, it will be hugely expandable and improvable, able to handle any level of traffic, much cheaper to run, and easily understood and maintainable by any professional software developers, Bahá'í or not, volunteer or paid, intimately acquainted with the code, or new to it.

TARGET DATE: 28 FEB. 2023

We have a unique window where Ismael Velasco (a senior software engineer) has the availability to block out 5 weeks of his time (Jan 24 - March 2) to execute this rebuild, which might not be possible again for some time, if ever.

Ismael is intimately acquainted with bahai-library.com's functionality as a user, attuned to its mission as a supporter from its inception, and spent 7 months in 2021 mapping its codebase and architecture with a team of professional volunteers, so this represents a unique opportunity to achieve an elusive yet urgent and critical upgrade to ensure the project's longevity and growth.

SITE VULNERABILITIES

The current codebase and infrastructure of Bahá'í Library Online has reached a critical limit that seriously endangers the future of the project.

1

Because bahai-library.com was built in 1997 and has remained fundamentally unchanged since 2010, the technologies and architecture it runs on are fragile in many ways, from security risks to maintainability barriers, and hard limits on application development and growth.

2

Because it was built in a careful way, it has lasted impressively well, but its architecture means it cannot be simply modified (refactored) into a more maintainable codebase, or enhanced with modern features within its current form. To make it maintainable and expandable it must either be rebuilt entirely, or eventually critically malfunction, be hacked, or both. This could happen in a few months or in a few years, and there is no way to predict it.

3

The current codebase was built in a necessarily ad-hoc way, meaning it's hard to understand without extensive familiarity with the ins and outs of its 15,000 lines of code. It would take a senior developer 2-3 weeks of full time employment merely to understand the app well enough to begin to maintain it. This would be exacerbated in the absence of Bahá'í context. Even with good familiarity, there is a high risk of side-effects from any code changes, a risk heightened if the developer is more junior.

4

This means that outside of Jonah, it is currently very hard and/or very risky to onboard any new software maintainers, placing on Jonah the burden of being a single point of failure for the entire project.

PROJECT MILESTONES

In Apr-Nov 2021, with support from a seed funding donation, Ismael convened a team of 7 developers skilled in PHP (the programming language of the current bahai-library.com) and carried out extensive scoping, architectural design and specification work:

- Mapping the current application's codebase and data structure, its strengths, vulnerabilities and redundancies;
- Defining an architectural redesign;
- Implementing a database redesign;
- Creating a full specification for an API (a tool to allow bahai-library.com to power any number of applications beside the current website)

In January 2023, Ismael returned to the task, using the learning above to plan a rebuild and migration strategy that could be completed five weeks, would apply the redesign work above, be fully maintainable by experienced developers regardless of their programming language, and be future-proofed and scalable.

Bahá'í Library Online will now be developed entirely in the Cloud ("cloud native") harnessing the infrastructure, tools and services available in Amazon's AWS to:

- 1** Rapidly and powerfully recreate and extend the current bahai-library.com functionality;
- 2** Reduce costs;
- 3** Lower our environmental footprint;
- 4** Build on Amazon's state of the art, secure and infinitely scalable infrastructure
- 5** Transfer the core of maintenance work to Amazon, and concentrate our future software development effort on features unique to bahai-library.com

This will hugely increase the pool of programmers able to maintain, contribute to, or build on top of bahai-library.com, with faster/cheaper onboarding and resilience to change.

It will allow Bahá'í Library Online to survive into its next stage, guided by Jonah in its unfolding, but not technically dependent on him for its survival.