

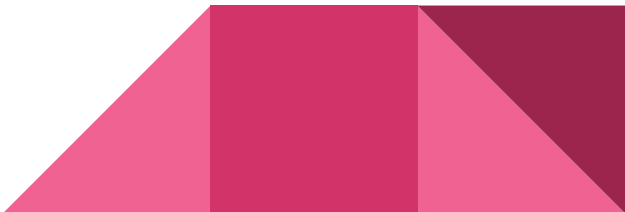
Nona Research Foundation

Creating a Synthetic Biology Software Commons

Curtis Madsen & Nicholas Roehner (Boston University)

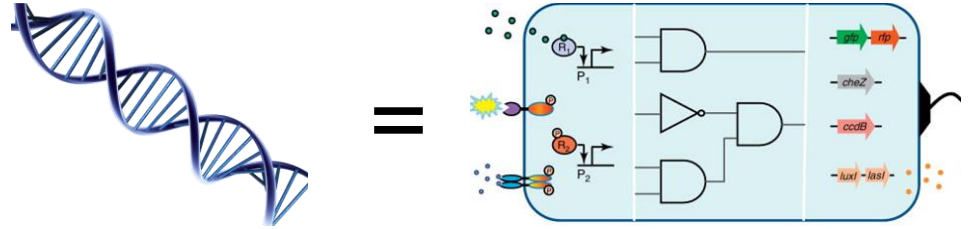


Synthetic Biology & Software



Synthetic Biology & Software

DNA behaves like an
electric circuit



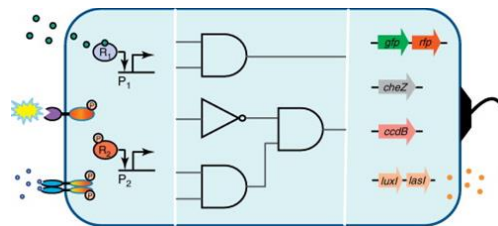
Synthetic Biology & Software

DNA behaves like an electric circuit

Analysis of such circuits demands software



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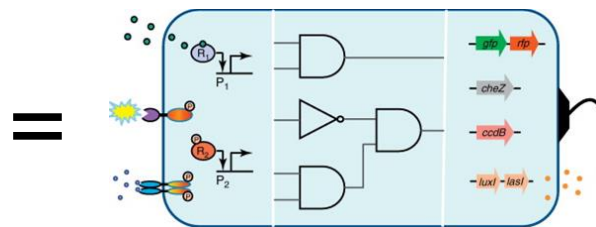


OrCAD[™]
CADENCE PCB SOLUTIONS

SystemVerilog

Synthetic Biology & Software

DNA behaves like an
electric circuit

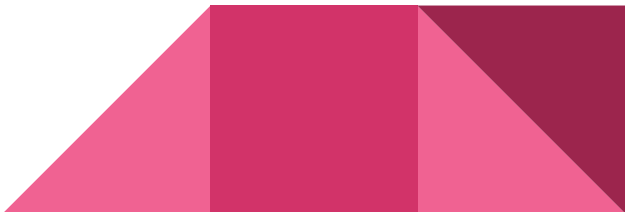


Analysis of such circuits
demands software



That's why **nona**
RESEARCH FOUNDATION
is here!

Problem With Academic Software

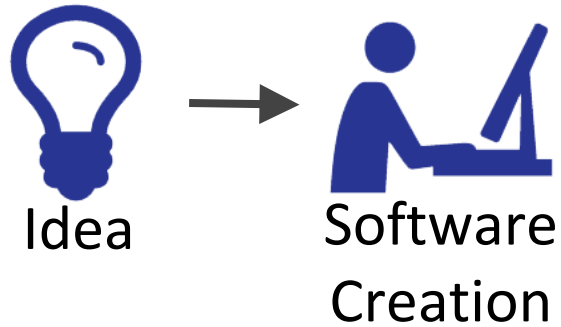


Problem With Academic Software

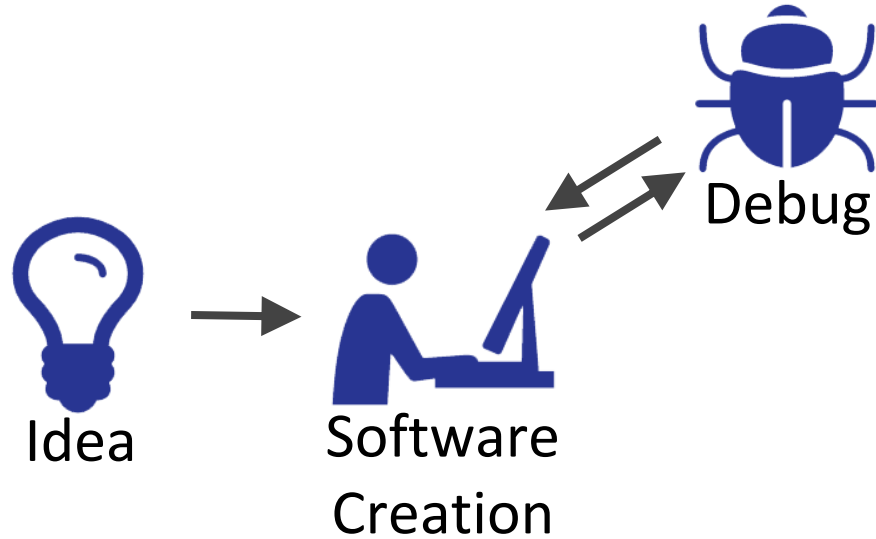


Idea

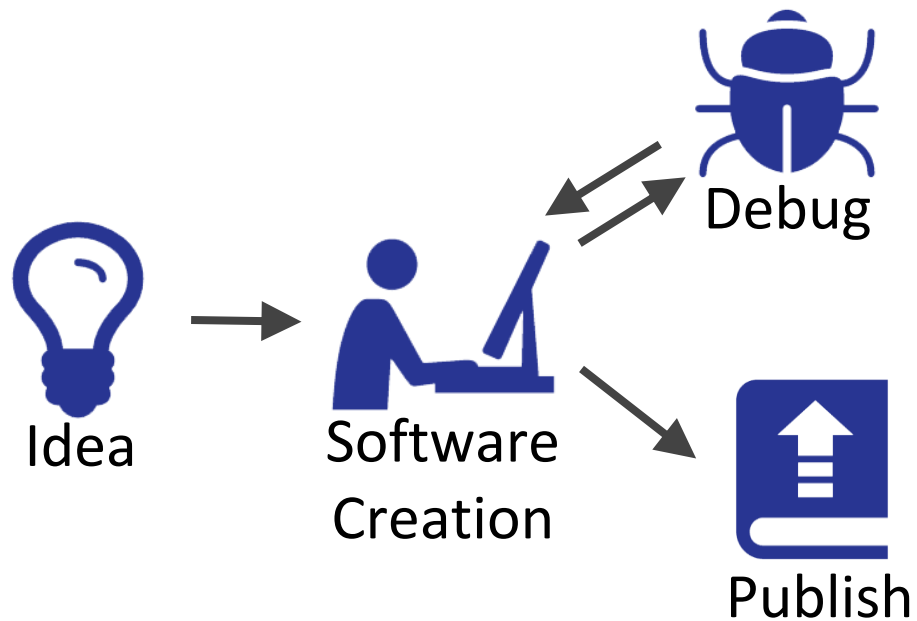
Problem With Academic Software



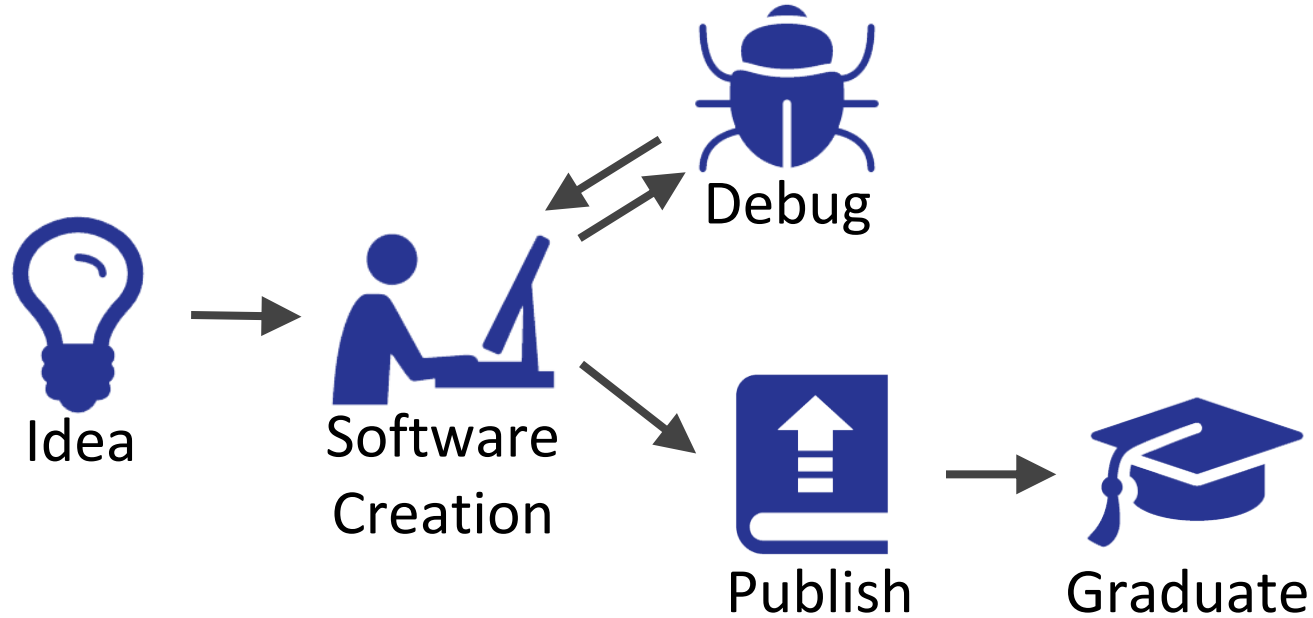
Problem With Academic Software



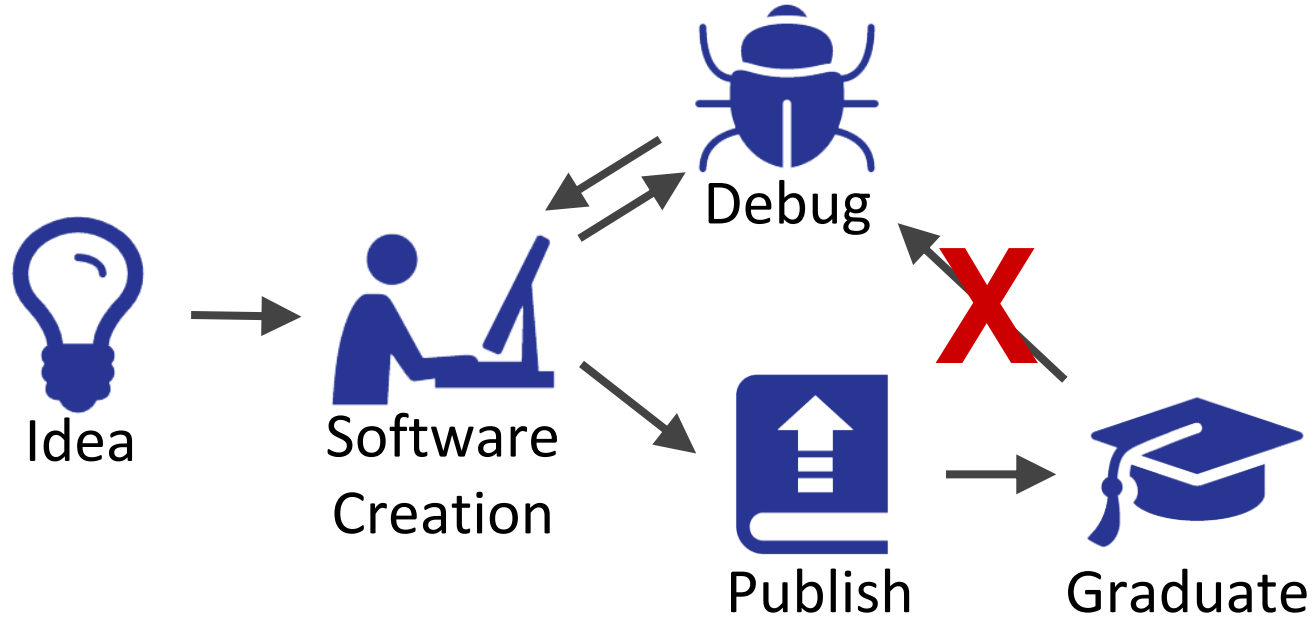
Problem With Academic Software



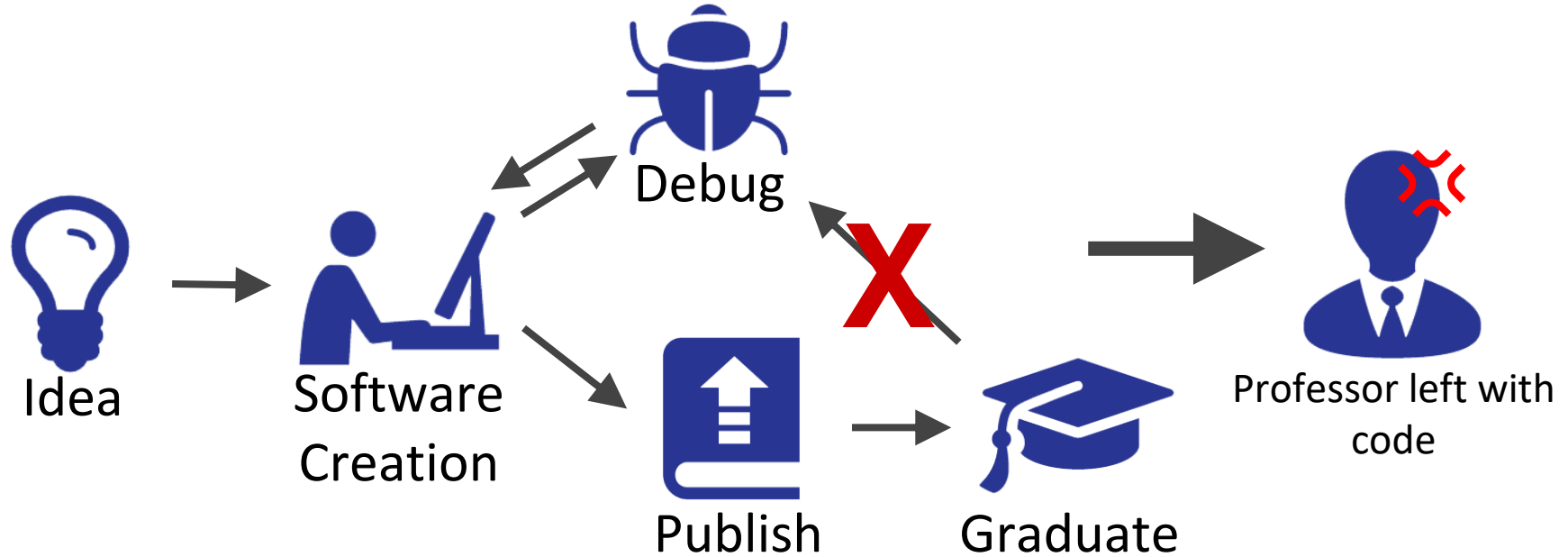
Problem With Academic Software



Problem With Academic Software



Problem With Academic Software

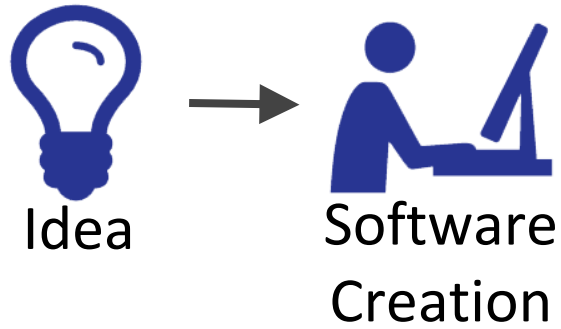


Nona's Mission

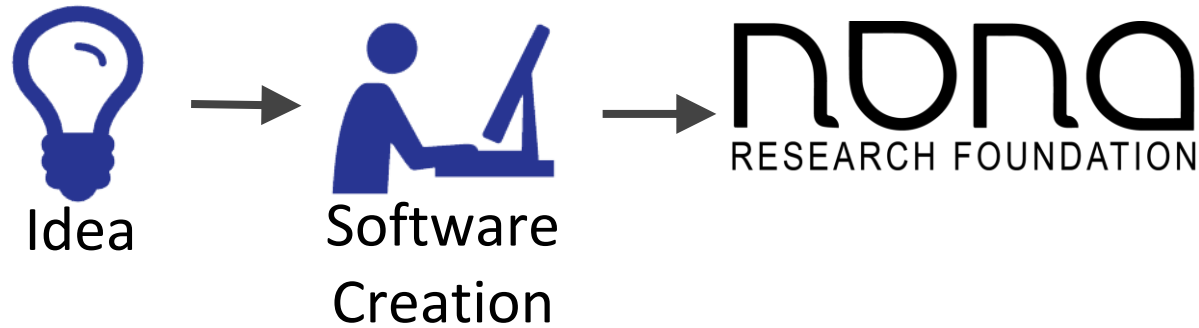


Idea

Nona's Mission



Nona's Mission



Nona's Mission



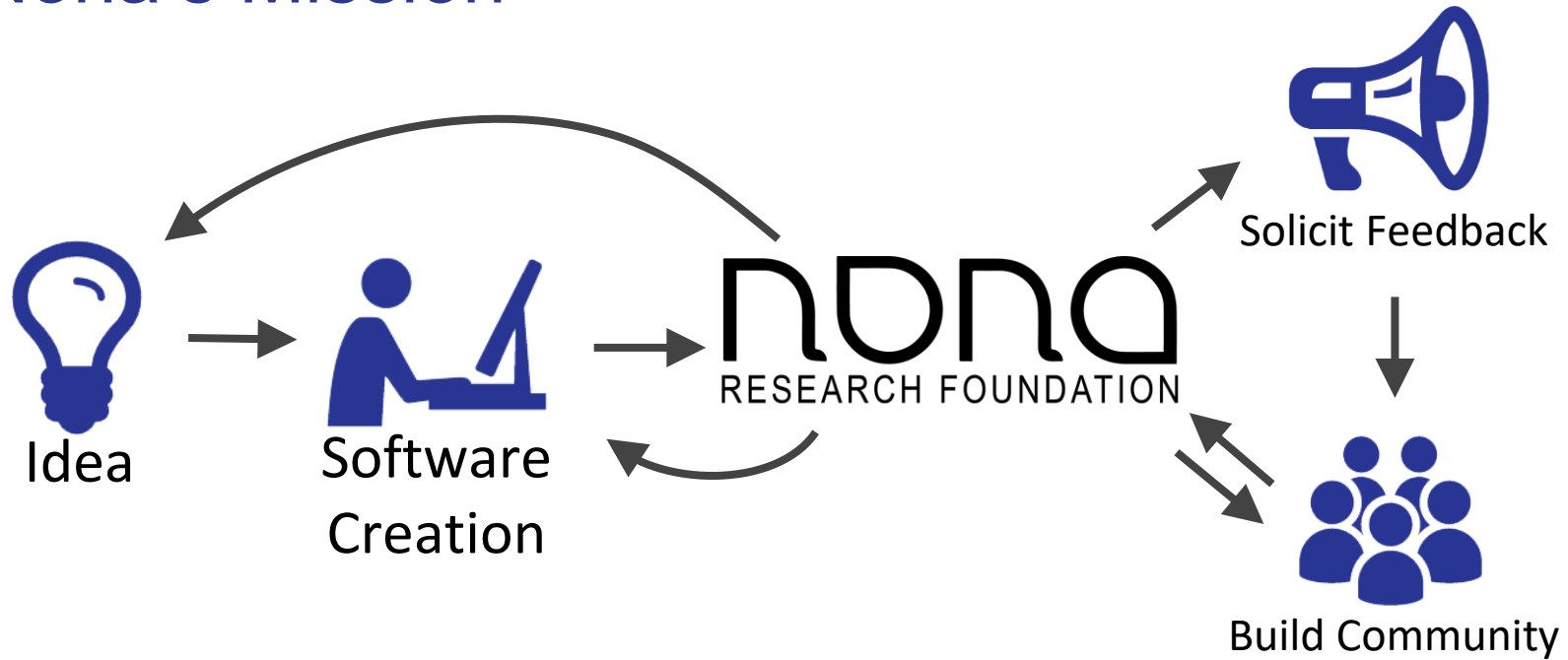
Nona's Mission



Nona's Mission



Nona's Mission



Benefits of Nona

Better Compatibility

Less Duplication

User Friendly

Crowd Sourced Usability

Better Organization

Nona Research Foundation Inc. is a non-profit public-benefit organization founded in 2013.

How to participate

Browse software at nonasoftware.org

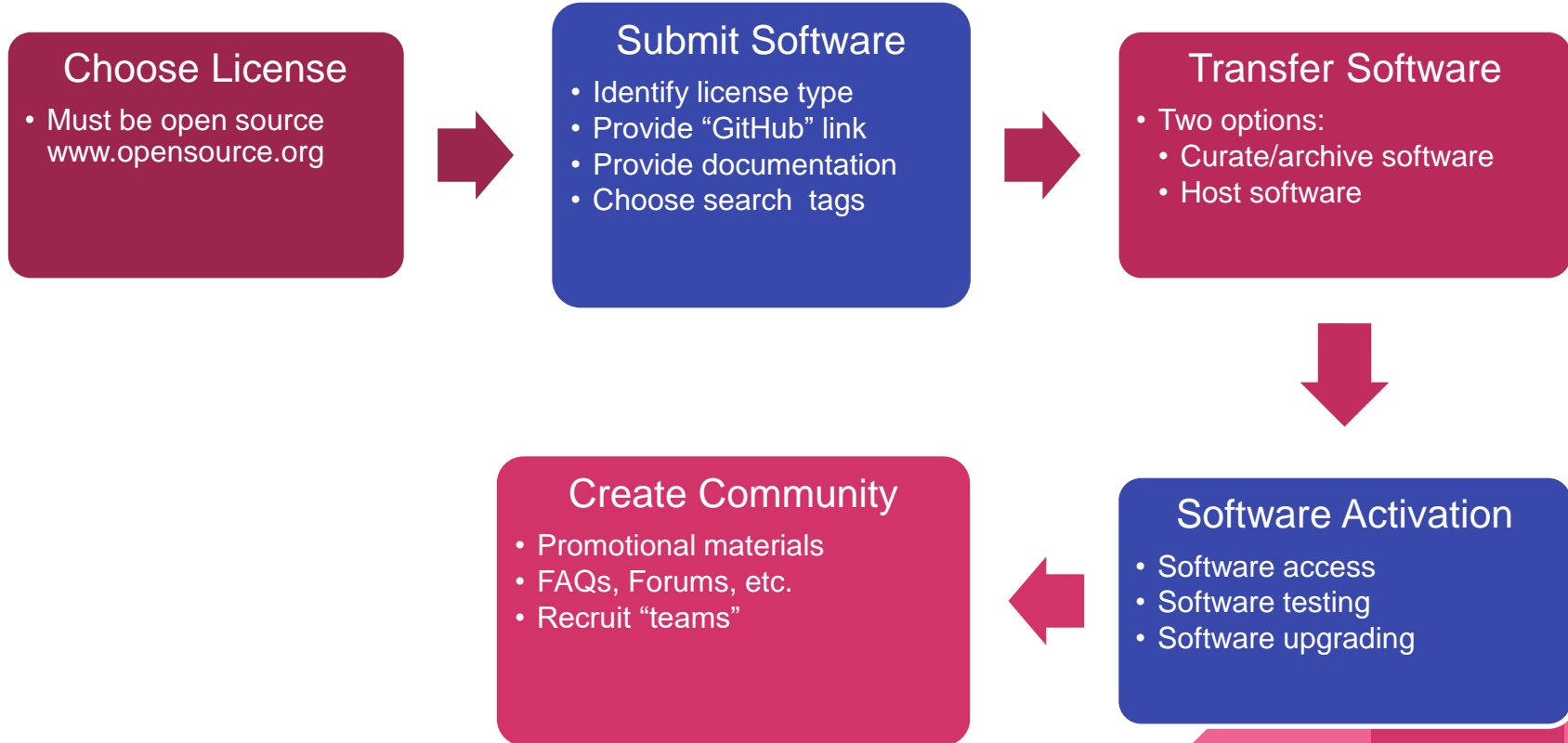
The screenshot displays the nonasoftware.org website. At the top, a dark navigation bar contains links for HOME, ABOUT NONA, TEAM, SOFTWARE, COMMUNITY, and LEARN. A mouse cursor is positioned over the SOFTWARE link, which has opened a dropdown menu with two options: AVAILABLE SOFTWARE and SOFTWARE SUBMISSIONS. Below the navigation bar, a large blue banner features the word "SOFTWARE" in white, followed by the text: "Use Nona's curated and hosted software to create a 'safe space' for running laboratory tests, your own information that cycles back to support your inter".

Below the banner, the "SPECIFICATION" section is visible, featuring a large header with the Nona logo and the word "SPECIFICATION". Underneath, there are three software specifications listed in a grid:

- CELLO® SPECIFICATION**: Software for creating genetic circuits, using as input a high-level logic specification written in Verilog. It includes links for Project Website and Project Code.
- SBOL VALIDATOR SPECIFICATION**: A web-based validator for SBOL files. It offers support for SBOL2, SBOL1.1, and GenBank, and it is accessible through a web GUI or a RESTful API. It also includes links for Project Website and Project Code.

The bottom right corner of the image shows a decorative graphic with overlapping pink and purple geometric shapes.

Submit Software to Nona



Come to Nona Works

2 ½ Day Hackathon:

- February 2017
- In San Francisco at AutoDesk
- ~ 5 challenges from different sponsors
- Scholarships will be available

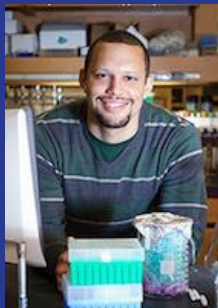
Biology:

- Synthetic Biologists
- Bioinformaticists
- Biological Engineers
- Computational Biologists

Software:

- Computer Scientists
- App Developers
- Electrical Engineers
- Information Technology

Nona Team



Douglas Densmore, PhD
President



Andrea Desrosiers
Executive Director



Prashant Vaidyanathan
Development Support



Holly Million
Fundraising



Avi Robinson-Mosher, PhD
Wyss Institute, Nona Clerk



Brian Klobucher
Raytheon, Nona Treasurer



Chris Voigt, PhD
MIT, Nona Board



Chris Anderson, PhD
20n, Nona Board

Presenters:



Curtis Madsen, PhD
Boston University



Nicholas Roehner, PhD
Boston University

nonasoftware.org/contact

 @nonasoftware