NUMFOCUS

OPEN CODE = BETTER SCIENCE

NumFOCUS: An Approach to Sustaining Scientific Software

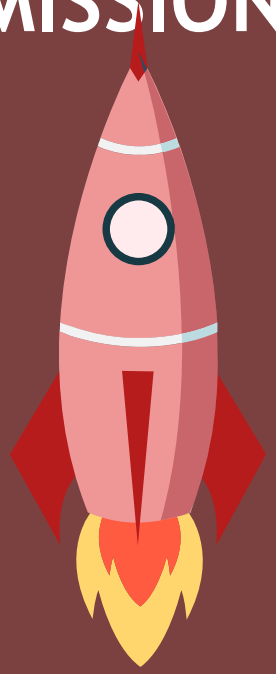
PRESENTED BY: Andy R. Terrel

# MISSION

Promote sustainable high-level programming languages, open code development, and reproducible scientific research.

NUMFOCUS

# WE ACCOMPLISH THIS MISSION.



**EDUCATIONAL PROGRAMS**
Scholarships, Diversity, Sustainabiilty

**EVENTS**
Conferences and Meetups

**FISCAL SPONSORSHIP**
Legal and Fiscal services

**DATA SCIENCE AND SCIENTIFIC COMPUTING COMMUNITY**
Common challenges and communication

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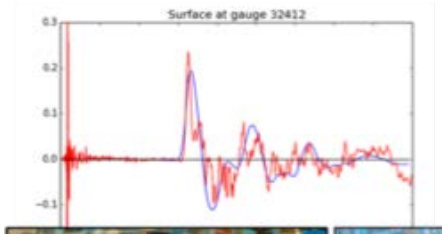
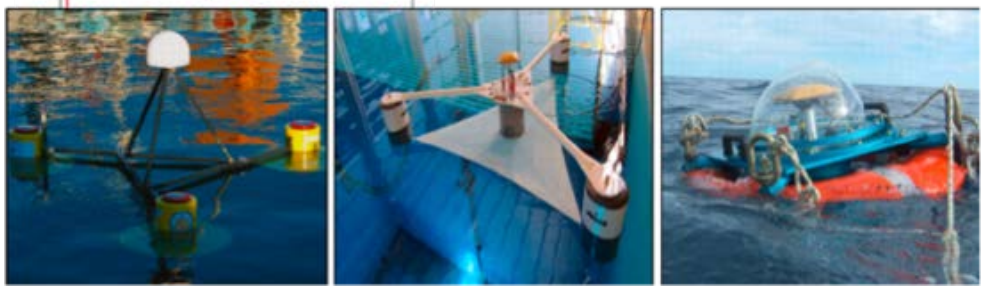
# Touching Humanity

# HURRICANE SANDY

# HURRICANE DATA SCIENCE



$$\frac{\partial \eta}{\partial t} + \frac{\partial (\eta u)}{\partial x} + \frac{\partial (\eta v)}{\partial y} = 0$$

$$\frac{\partial (\eta u)}{\partial t} + \frac{\partial}{\partial x}\left(\eta u^2 + \frac{1}{2} g \eta^2\right) + \frac{\partial (\eta u v)}{\partial y} = 0$$

$$\frac{\partial (\eta v)}{\partial t} + \frac{\partial (\eta u v)}{\partial x} + \frac{\partial}{\partial y}\left(\eta v^2 + \frac{1}{2} g \eta^2\right) = 0.$$

# HUMAN TRAFFICKING

NEWS CRIME & COURTS

**FBI recovers 9 child sex trafficking victims in Colorado, Wyoming as part of national operation**

Authorities say they have seen a growing — and alarming — trend of child sex trafficking being perpetuated through social media in Colorado

DAILY FREEMAN

POLICE NEWS

News Sports Business Entertainment Lifestyle Obituaries Opinion

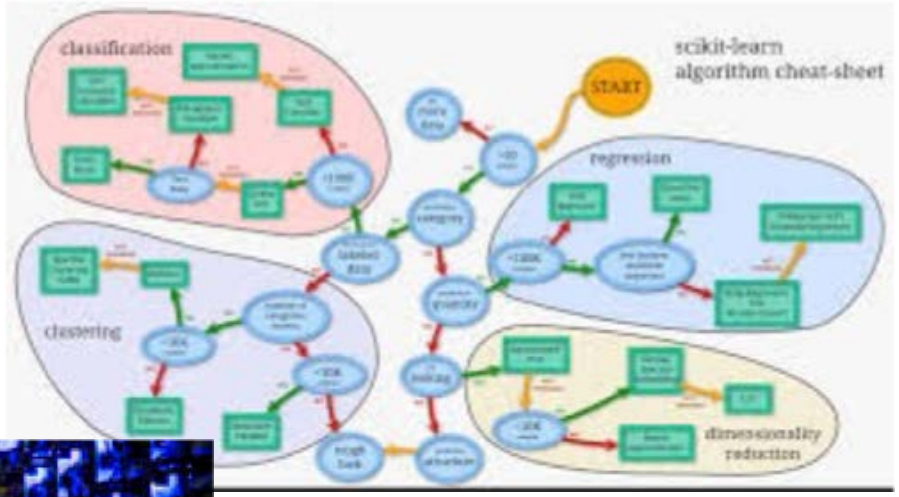
Police Blotter

**New Paltz man, 52, sentenced to federal prison for sex trafficking of minors**

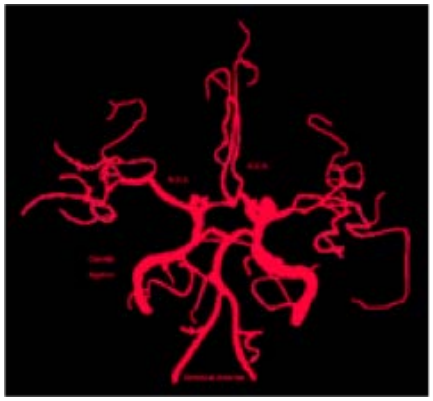
EXCLUSIVE

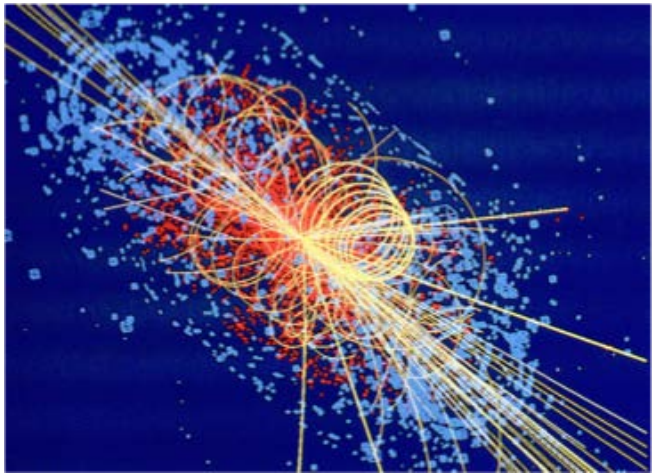
**Two arrested for forcing two 16-year-olds into prostitution in Brooklyn apartment**

# HUMAN TRAFFICKING DATA SCIENCE



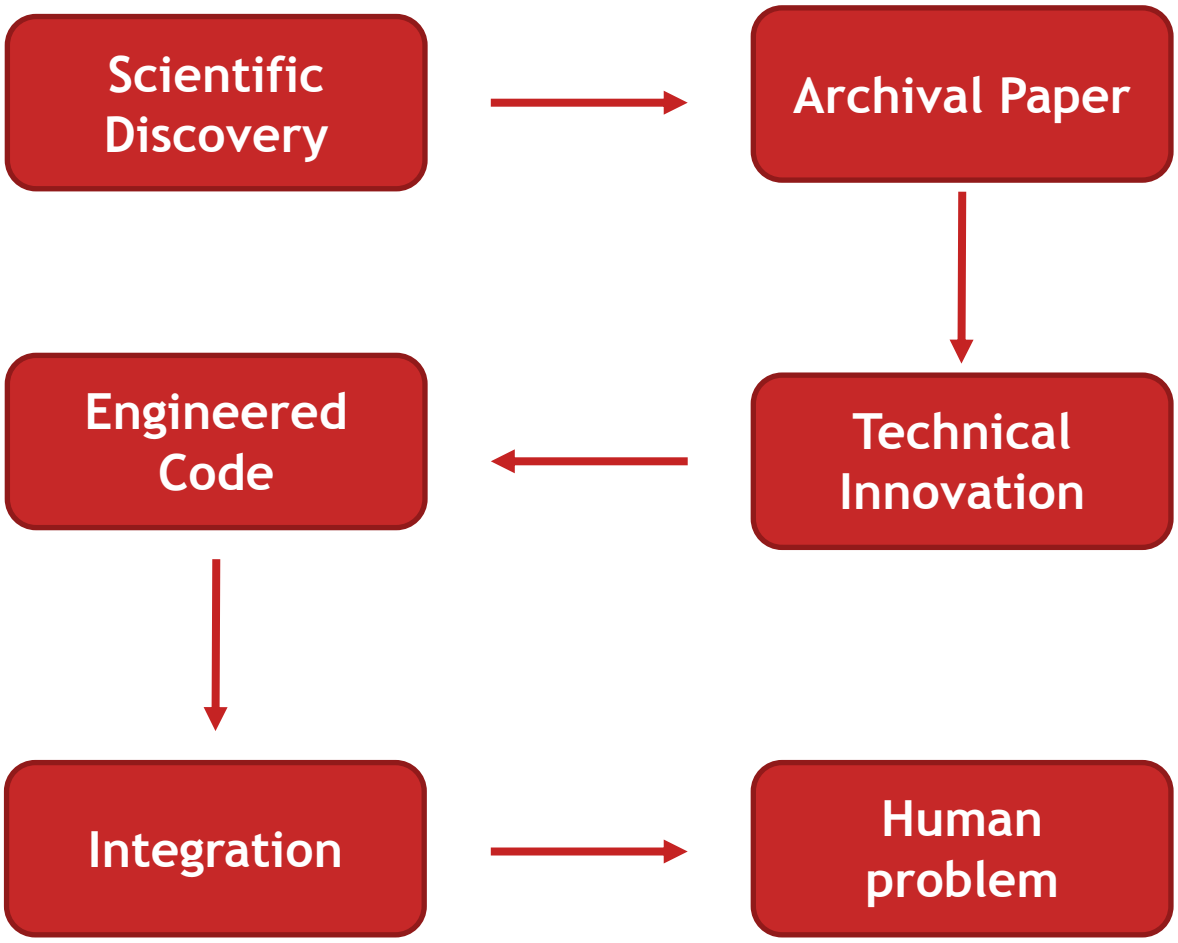
# MORE SCIENCE

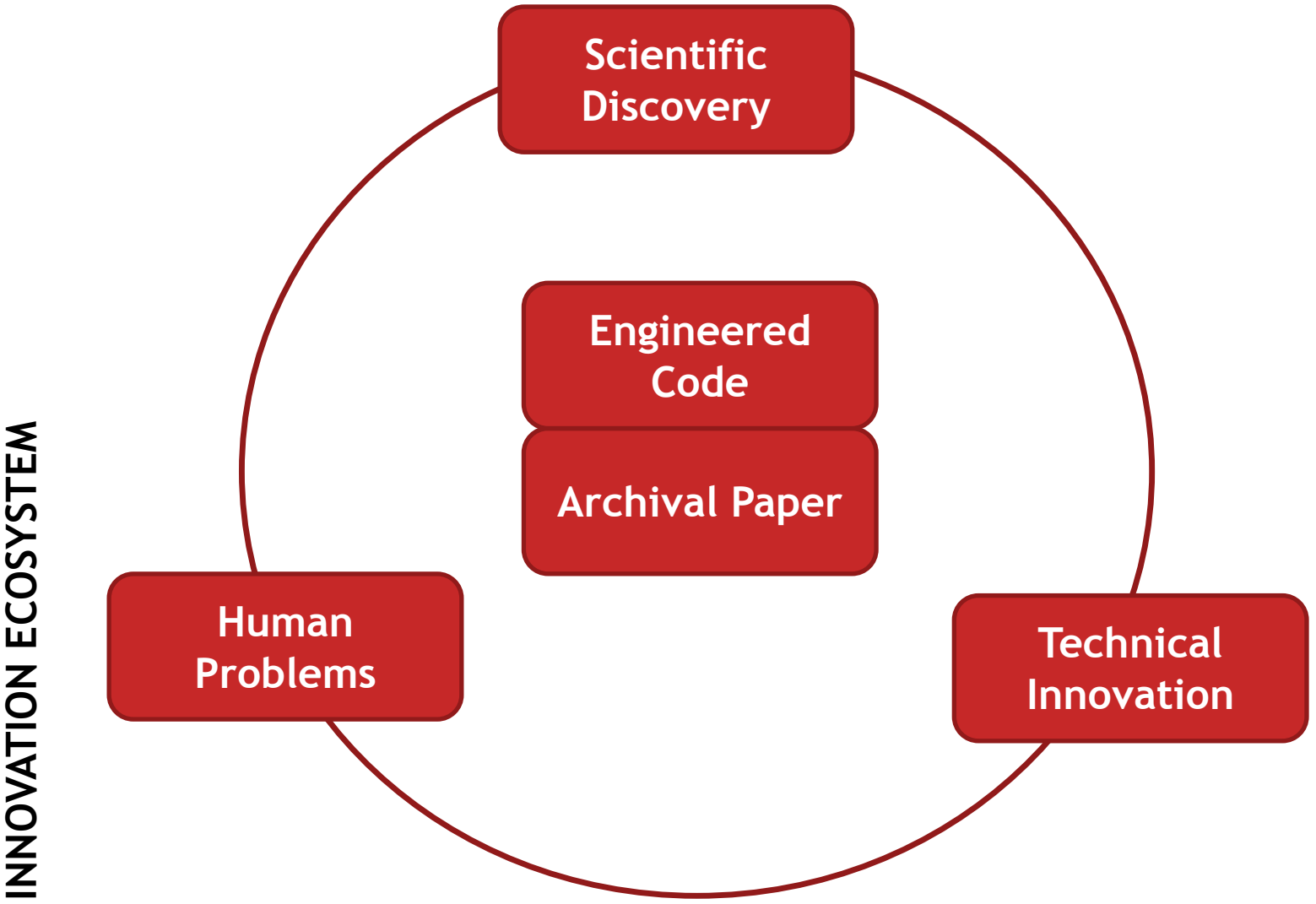




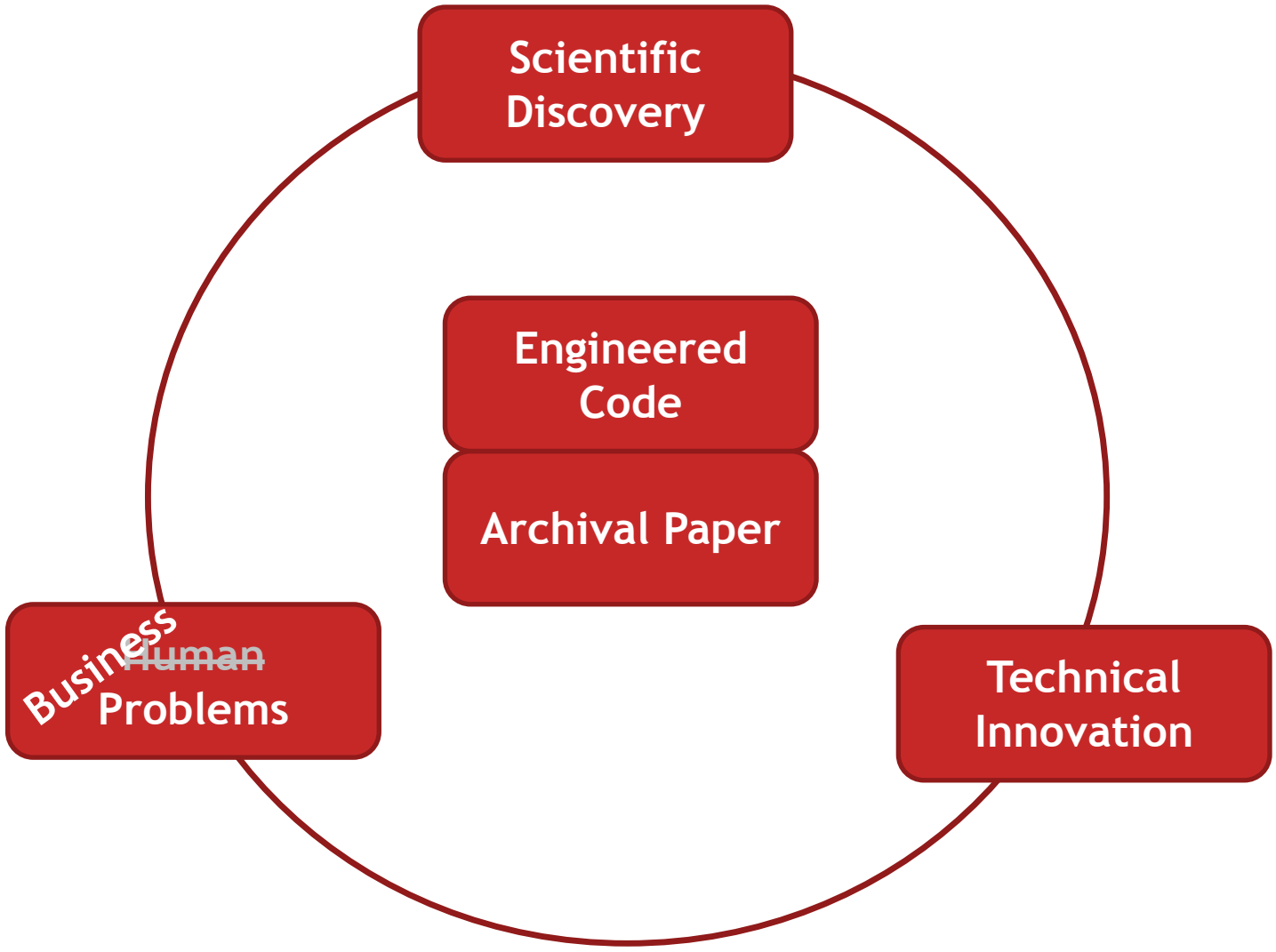
# WHERE IS THE SOFTWARE PROJECT?

TRADITIONAL INNOVATION PIPELINE




INNOVATION ECOSYSTEM
Scientific Discovery
Engineered Code
Archival Paper
Human Problems
Technical Innovation

INNOVATION ECOSYSTEM



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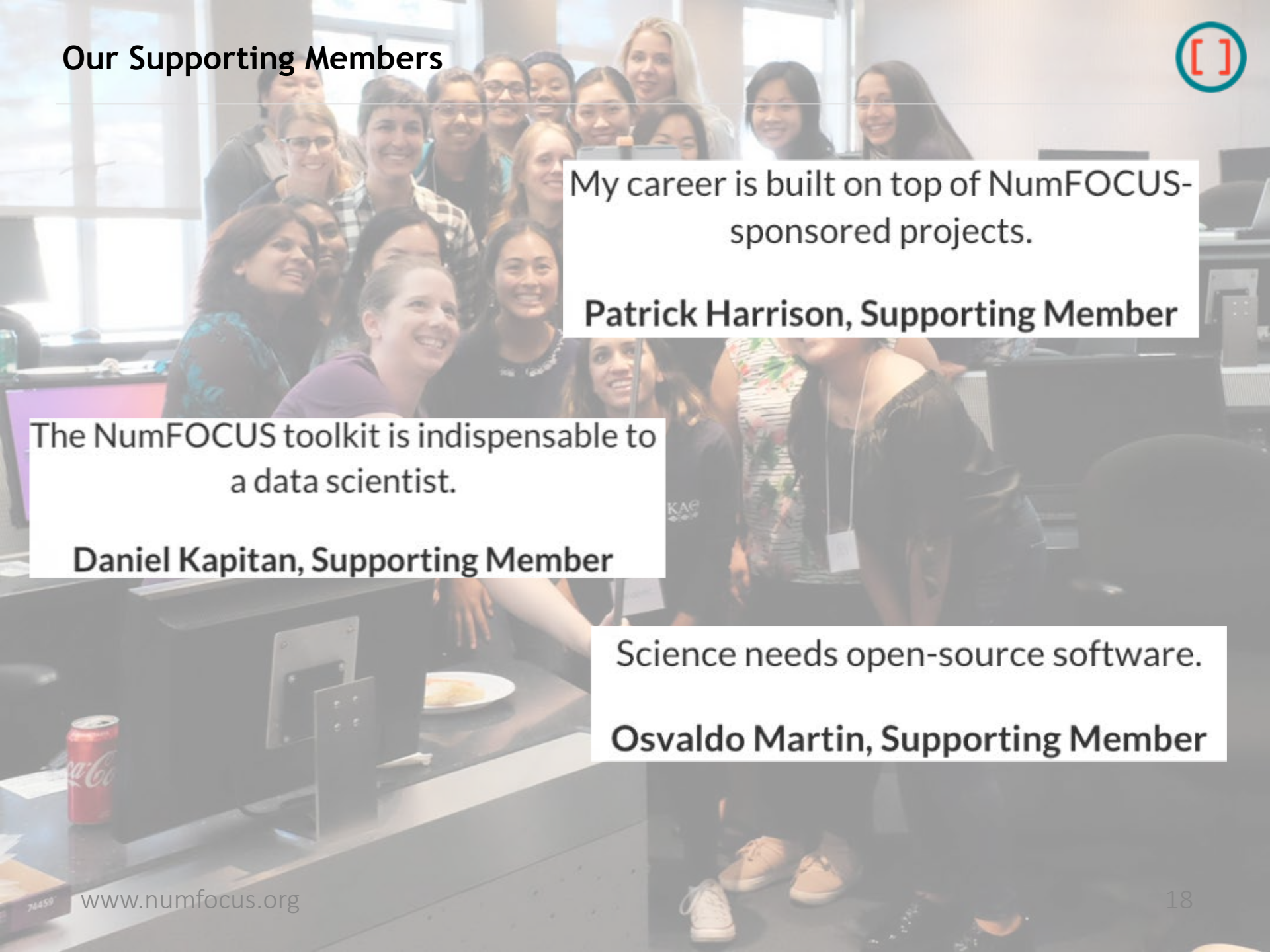
# Building an Innovation Ecosystem

# OUR SPONSORED PROJECTS

# Affiliated Projects

## Our Corporate Sponsors

## Our Supporting Members



# PYDATA IMPACT 2016

**9**
Events

**7**
Countries

**331**
Speakers

**2,812**
Attendees

**183**
Diversity Scholarships

**$257,849.67**
Proceeds Benefitting NumFOCUS

# PYDATA Meet Ups Impact

**59,077**
Members

**35**
Countries

**80**
Groups

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# Functioning Principles

- PROJECTS NEED FUNDING
- PROJECTS NEED STABILITY
- PROJECTS NEED INDEPENDENCE
- PROJECTS NEED LOGISTICAL SUPPORT

## HOW NUMFOCUS MEETS PROJECT NEEDS

- FISCAL & LEGAL SERVICES
- SUSTAINABILITY
- COMMUNITY

# WHAT HAPPENS WHEN YOUR PROJECT RECEIVES CORPORATE FUNDING?

## FISCAL SPONSORSHIP

- LEGAL SERVICES
  - Licensing
  - Trademark Registration & Ownership
  - Contracts & Agreements
- FINANCIAL SERVICES
  - Accounts Payable & Receivable
  - Grant Administration
  - Contractor Agreements
  - Taxes & Reporting
- OPERATIONAL SERVICES
  - Technical Infrastructure
  - Conference & Event Planning
  - Consulting on a variety of administrative requests

# HOW DOES YOUR PROJECT SURVIVE?

WHY IS INCREASING PUBLIC ENGAGEMENT IMPORTANT?

HOW CAN YOUR PROJECT INTERACT MORE WITH THE COMMUNITY?

## EDUCATIONAL PROGRAMS

- CONFERENCES
- WORKSHOPS
- SPRINTS & HACKATHONS
- GSoC
- VIDEOS
- MEETUPS
- DIGITAL COMMUNITIES

- STAFF
- BOARD OF DIRECTORS
- ADVISORY COUNCIL
- SUSTAINABILITY ADVISORY BOARD
- DISC COMMITTEE
- PYDATA LOGISTICS COMMITTEES
- PROJECT LEADS

# NUMFOCUS

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www.numfocus.org