



**DEVOPS
WORLD**
by CloudBees

COMMUNITY

Expanding Open Source in Africa

Zainab Abubakar & Mark Waite

Experience Report



Who we're reaching

Expanding open source in Africa She Code Africa Contributhon

Why Contributhon?

Why Contributhon (Organizers) ?

An Africa wide open source Bootcamp focused on:

- building more women OSS contributors
- creating more diversity in the African open source ecosystem.



Why Contributhon (Jenkins Project) ?

Improve Jenkins core and plugins with

- more contributors
- solutions to valuable problems

Improve Jenkins project

- develop group mentoring techniques





Who we're reaching

Expanding open source in Africa She Code Africa Contributhon

Who is involved?

Who's involved

Sponsoring organizations fund the program

- Companies
- Foundations

Funding pays participants \$500 for a month of contribution to open source



The @ Company



Who's involved

Open source mentoring organizations

- Help participants improve their project

Propose projects with tasks

Provide mentors to coach participants

Share feedback with participants

Evaluate project at its conclusion



Who's involved

Candidates - 180+ Women in Africa

- Students
- Recent graduates

Participants - 16 Women

Apply to the program

Participants selected based on work samples, role descriptions, and background



What we're doing

Expanding open source in Africa She Code Africa Contributhon

What was the project?

Improve Jenkins Pipeline - Snippets, Examples, Help

Jenkins Pipeline Domain Specific Language is code

- Users are unfamiliar with the generator tools
- Users want more examples
- Users want more help

Help the users find existing resources

Provide more examples and help

Participants learn Jenkins Pipeline, Java build

The screenshot displays the Jenkins Snippet Generator interface. The sidebar on the left contains navigation links: Back, Snippet Generator (selected), Declarative Directive Generator, Declarative Online Documentation, Steps Reference, Global Variables Reference, Online Documentation, Examples Reference, and IntelliJ IDEA GDSL. The main content area is titled 'Overview' and 'Steps'. Under 'Steps', there is a 'Sample Step' dropdown menu set to 'addInfoBadge: Add Info Badge'. Below this, there are input fields for 'Text' (containing 'Information goes here') and 'Id' (containing 'identifier'). A blue button labeled 'Generate Pipeline Script' is visible. Below the button, the generated pipeline script snippet is shown: 'addInfoBadge id: 'identittier', text: 'Information goes here''. This snippet is circled in red.

Project phases

Progressively more challenging steps

- Create a Jenkins Pipeline
- Build a Jenkins plugin
- Modify existing Pipeline help
- Insert missing Pipeline help
- Suggest Pipeline Syntax snippet generator in plugin docs
- Add snippet generator hints to Pipeline step help

We thought [this](#) was a pretty good plan, but ...

(<https://bit.ly/contributhon-plan>)





Challenges

Expanding open source in Africa She Code Africa Contributhon

Challenges and surprises

Challenges (Organizers)

- Finding Mentoring Organizations
- Funding and Sponsors
 - Cross Country Boundaries
- Selecting appropriate Program Timelines
- Timezone Complexity



Don't miss the real goal!

Help participants develop skills to be ongoing contributors to open source

Project tasks should help the participants develop open source skills

Encourage interaction between mentors and participants



Remember the participants

Most participants are

- Beginning as developers
- Javascript their most likely language
- Web development most likely experience
- Enthusiastic but inexperienced

First experience with Jenkins

First experience with Java

Limited experience with Git and GitHub



Group mentoring is more difficult

Uncomfortable asking questions

Assume others already know the answers

Scheduled group time rarely works for all

New communication channels and patterns

⇒ Technical introduction sessions

⇒ Personal introductions during mentoring

⇒ Mentors praise and encourage questions





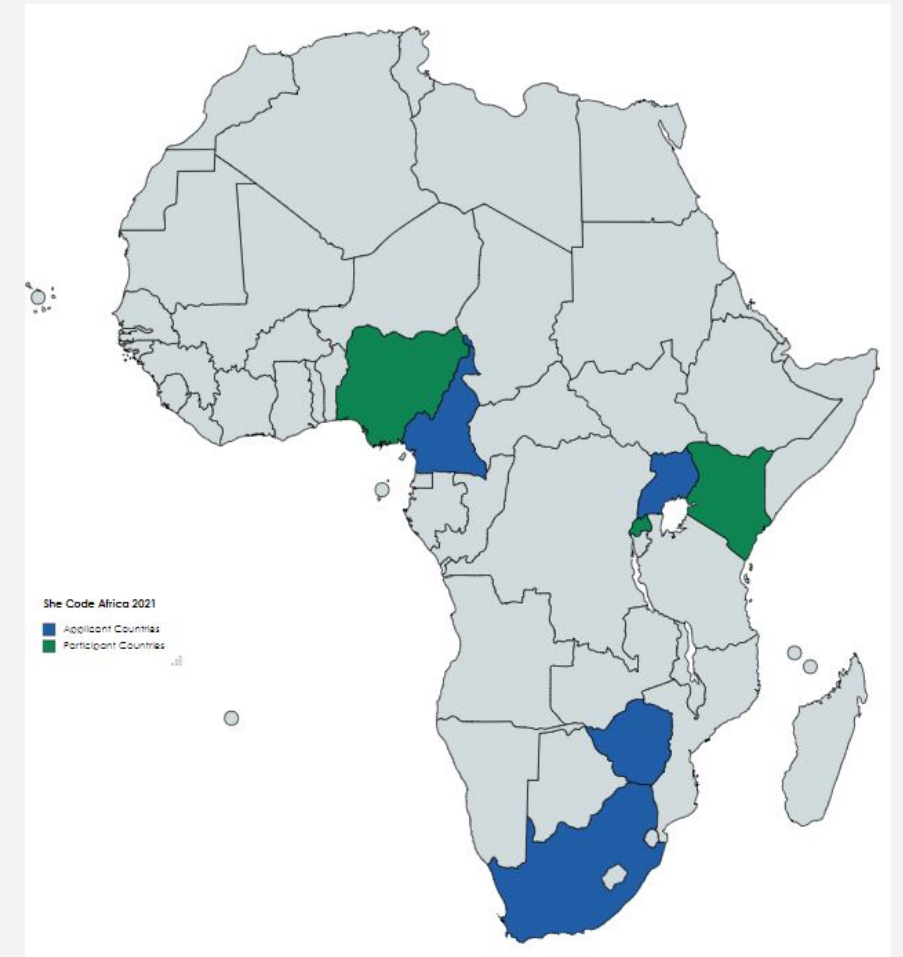
Challenges

Expanding open source in Africa She Code Africa Contributhon

Success Metrics

Success Metrics (Organizers)

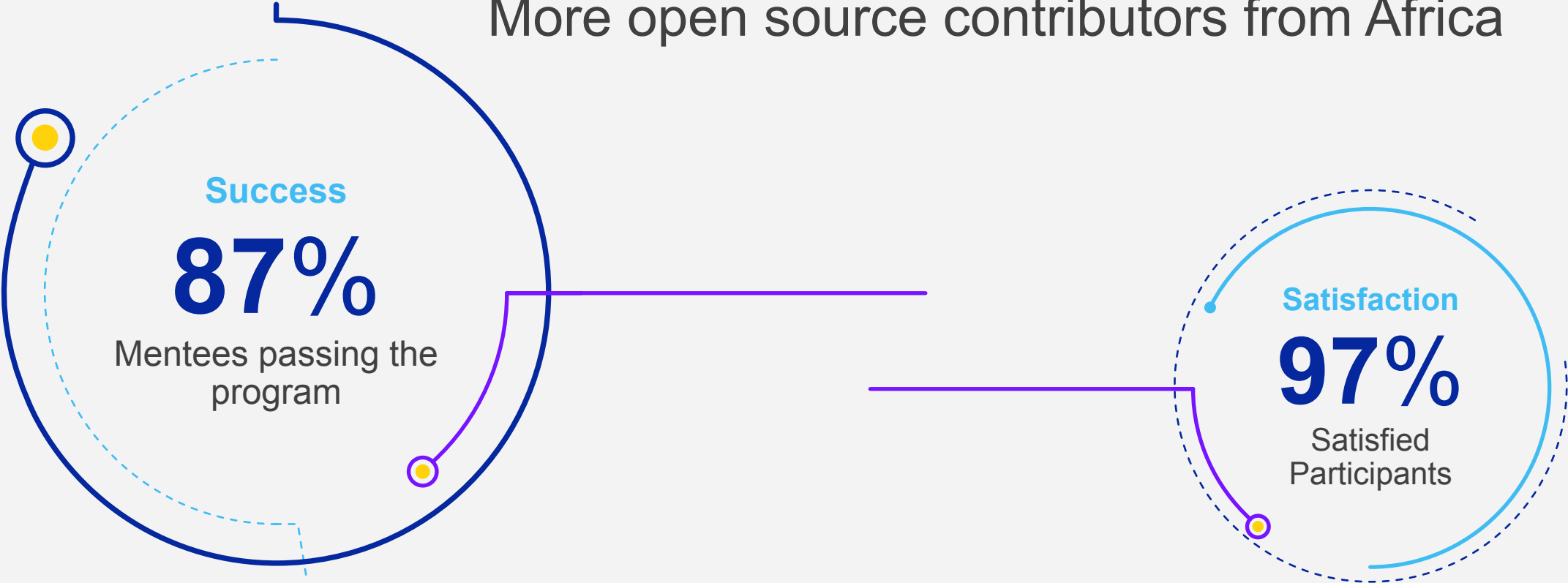
- Applicants from 7 African Countries (Cameroon, Kenya, Nigeria, Rwanda, South Africa, Uganda, Zimbabwe)
- 3 African Countries Participation (Kenya, Nigeria, Rwanda)



Mentee Success and Participant Satisfaction

Contribution by the numbers

More open source contributors from Africa





Thank you!

Zainab Abubakar and Mark Waite

Expanding Open Source in Africa - Experience Report