Open edX Con 2022

So You Want to Become a Core Contributor?

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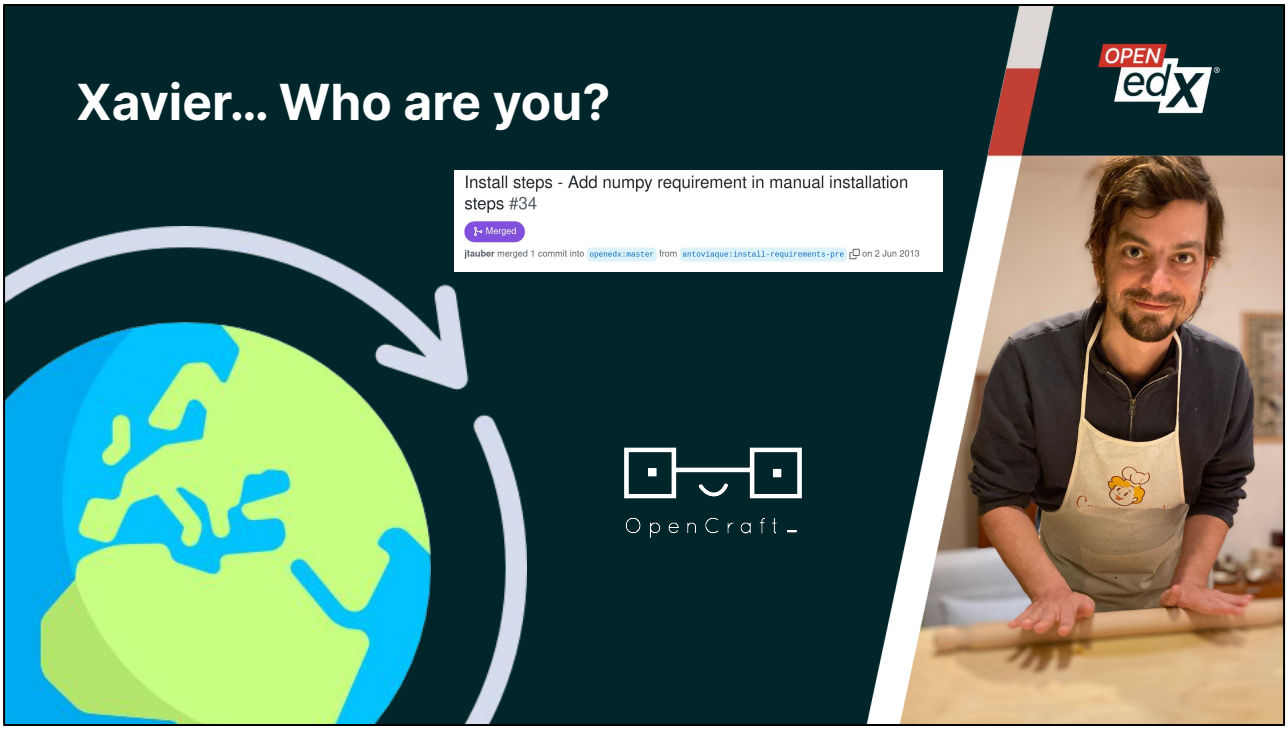

- Contributor (2013)
- Core
- OpenCraft
- Travel & explore

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- I travel a lot – I live a few months in a place before moving to the next
- I explore the places by doing things there – like for example pasta last month in Italy
- I contribute to Open edX – I like to brag about having the first contribution merged to the main project outside of edX in 2013 :p
- I founded OpenCraft, one of the main contributors to the project besides edX/2U and tCRIL
- I have contributed to build the core contributor program with edX, tCRIL and Sarina

Engineering manager at tCRIL, started at edX in 2012

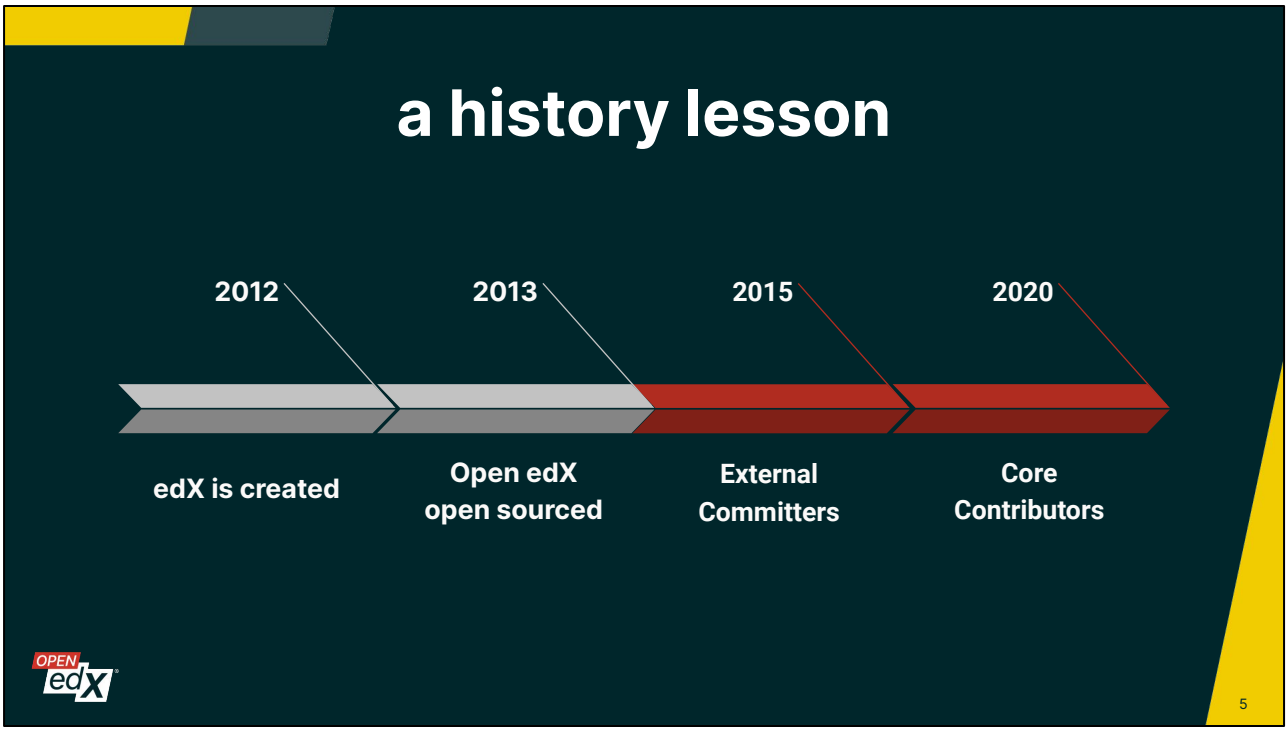
I live in Cambridge, MA with my three cat sons

My first experience with open source was in 2010, with a patch to the linux kernel (shown on screen)

(I love cooking and spicy foods!)

Core Contributor Program

... what is it?



- **2012**: **Only edx.org** runs & modifies code
- **2013**: Anyone can **run Open edX** & **submit changes** proposals but **only edX can merge** (aka integrate) & **take product decisions**
  - For contributor: **slow** speed
  - **Reluctance to review** changes not in **edx.org priorities**
  - Low **recognition/ownership**
- **2015**: 6 first **external committers** (aside from contractors):
  - Peter Pinch, Carson Gee (MIT), Phil McGachey (Harvard), Bertrand Marron (IONISx), Braden MacDonald, Xavier Antoviaque (OpenCraft)
  - But **rules to merge unclear** -> **reluctance to use** the permission, merges **remain mostly with edX**
- **2020:** Finally!

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Full notes:

- edX open sourced the Open edX codebase in 2013. This meant that anyone in the world could propose changes to the code
- However only people employed by edx.org had the ability to actually make changes to the code (ie, they could “commit” it) and have the final say when it

- came to product decisions, which made community development sometimes difficult
    - Speed of getting changes in
    - Prioritizing merging changes that edx.org didn't have a use for
    - Recognition of efforts, ensuring the sentiment of ownership of (and belonging to) the project
- External committers introduced in 2015 with 6 community members, who get merge rights on all the Open edX repositories:
    - From MIT (Carson Gee, Peter Pinch), Phil McGachey (Harvard), Betrand Marron (IONISx), Braden MacDonald, Xavier Antoviaque (OpenCraft)
    - But rules & rights about *when* it is appropriate to merge pull requests in these repositories are unclear, so often there is hesitation to merge anything but the smallest pull requests, and the reviews & merges remain mostly done by edX employees.
- These conversations continued, though, and in 2020…

References:

- External committers: some of the pages, which were on the wiki, don't seem to be available anymore - but I could find this one: https://openedx.atlassian.net/wiki/spaces/OPEN/pages/30967059/Committers
- Initial page of the core committer program: https://openedx.atlassian.net/wiki/spaces/COMM/pages/1685291740/Core+Committers+Phase+1+Goals

The core contributor program is born!

Nine Rings of Power

8

- External committers: Peter (MIT), Braden (OpenCraft)
- + Felipe (eduNext), Igor (Racoon Gang), Régis (Tutor), Zia (Edly), Omar (Appsembler), Usman, Jill (OpenCraft)
- Small group - risks for edX => trust
- Worked! Kudos community & edX

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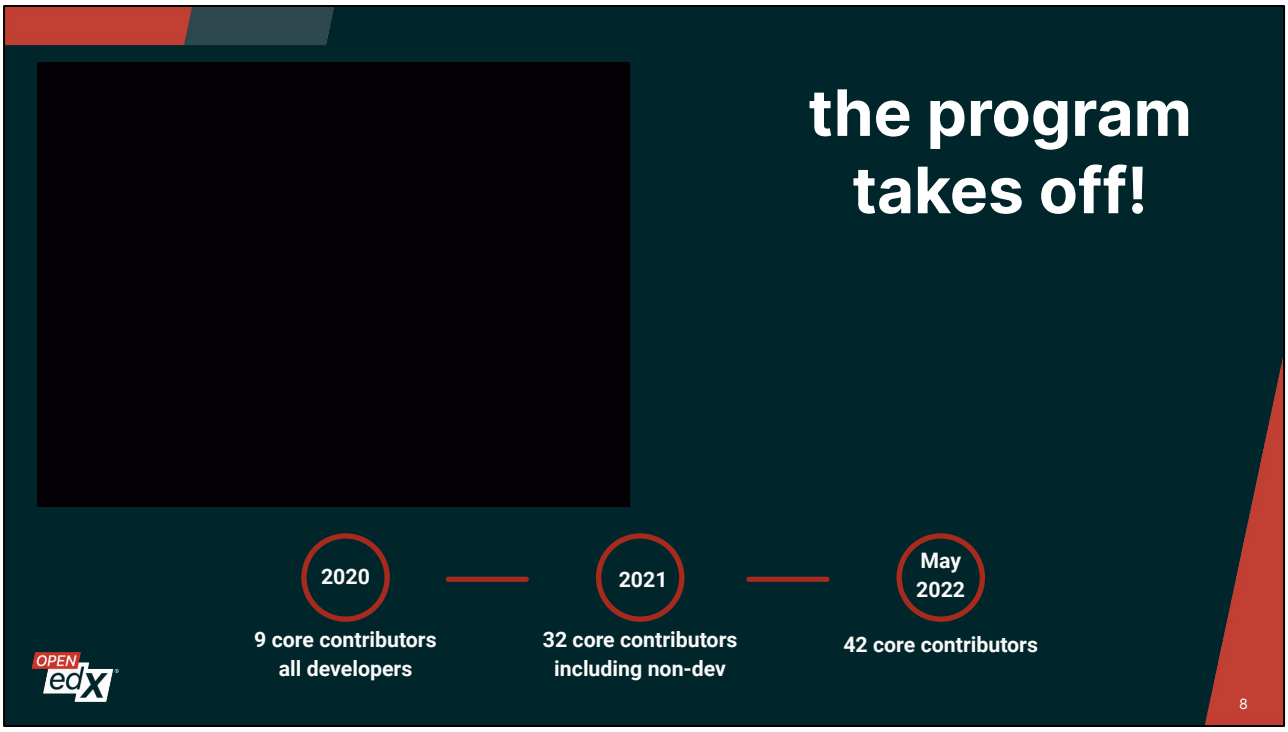
Full notes:

- The goal was to bring people outside of the edx.org team into the group of people who could write changes to the code
- At first we were focused only on coders, onboarding 9 community members who would be able to independently make changes to the code
    - Some were former external committers: Peter Pinch (MIT), Braden MacDonald (OpenCraft)
    - Others joined: Felipe Montoya (eduNext), Igor Degtiarov (Racoon Gang), Régis Behmo (Tutor), Zia Fazal (Edly), Omar Al-Ithawi (Appsembler), Usman Khalid, Jill Vogel (OpenCraft)

- Why couldn’t we just open the door and let lots of people join?
    - Edx.org doesn’t run off named releases - they run off the freshest code

- available
- That means that any code a core contributor adds will immediately run on the edx.org website… and may have unintended consequences
- Thus, in the pilot phase of the program, a small number of people were added, and all had partner engineers at edx.org
- This required a leap of faith from edX: they incurred risk to the project by doing this, but they believed this was beneficial to the community
- The pilot program verified this: seeing direct community participation lead to more ownership and participation at a minimum of risk to edx.org
- Kudos to edX for the trust in the community and the effort required to build the program. And kudos to the nine founding participants who showed what the community can do.



- 2021: non-code: project managers, translations, moderators, UX/UI, QA
- Future: product manager

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Full notes:

- Throughout 2020 and 2021, more core contributors were added - all of whom wrote code
- Starting in September 2021, the program expanded to include its first non-code positions: project managers & translations reviewers! We've also added Forums Moderator and UX/UI designer to our list of contributors, and are looking forward to welcoming QA engineers and documentation writers as soon as anyone is interested in the position. In the future, we're aiming to have a Product Manager position.

References:

- Announcement & presentation of the core contributors (then called "core committers") program on the Open edX blog: https://openedx.org/blog/open-edx-core-committers-program/

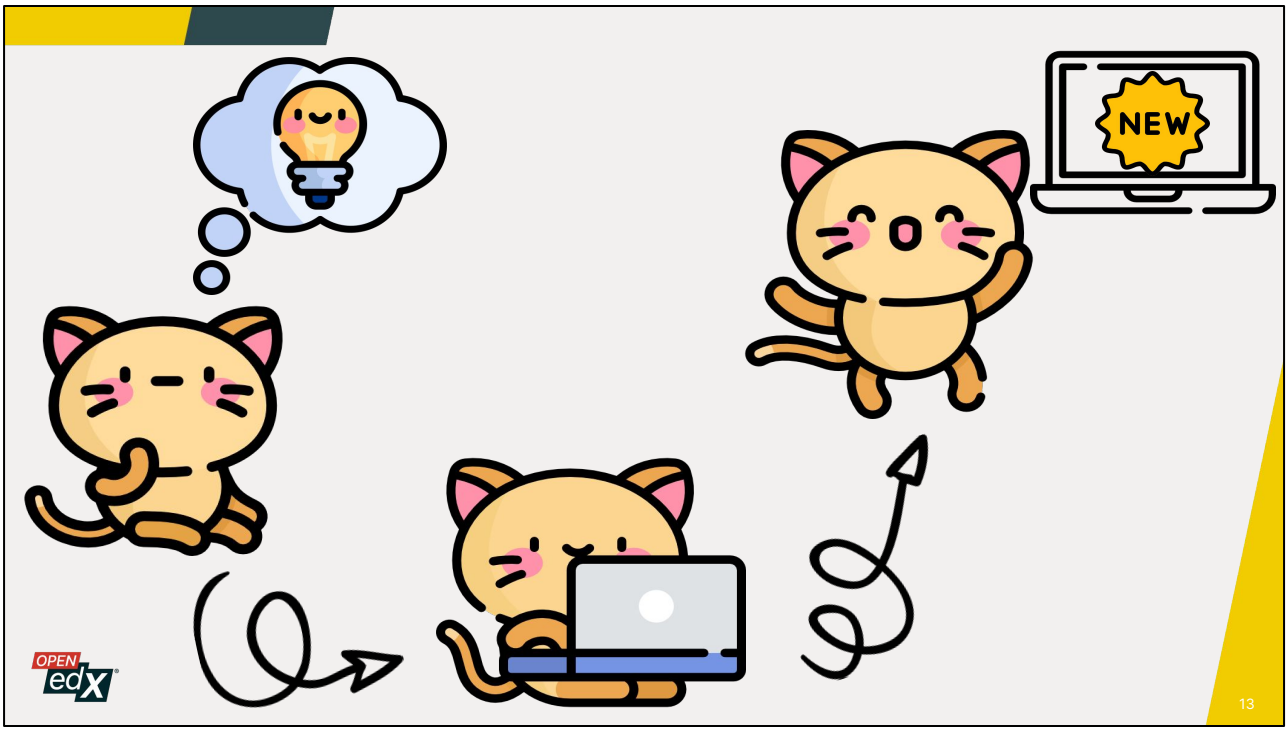
Core Contributors

... what do they do?

The CC program was established in order to give community members greater influence over the project's direction.

This is done by facilitating contributions to all areas of the project and granting trust in community members to make decisions that impact the future of Open edX.

One great example of this is the Hooks & Filters work by eduNEXT (see Felipe's talk for more detail). That project was conceived of by eduNEXT and driven forward by them, with help & input from the community



CCs contribute to the project in various ways and are granted certain rights, such as:

- **Independently own projects from start to finish (with community input along the way!) - ex: Hooks & Filters project by eduNEXT (see Felipe's talk) - went from idea to community-approved OEP to full implementation https://open-edx-proposals.readthedocs.io/en/latest/architectural-decisions/oep-0050-hooks-extension-framework.html**
- **Elevated access to systems your role needs to access, such as Reviewer access in Transifex, code review & commit rights to code repositories, or ability to change Open edX websites like the Marketing site**

As a CC you have rights including:

- Ability to join regardless of organizational affiliation
- Right to join the program in more than one role
- Participate in the voting process of choosing new CCs
- Elevated access to systems your role needs to access, such as Reviewer access in Transifex, code review & commit rights to code repositories, or ability to change Open edX websites like the Marketing site
- Co-maintain prioritized backlogs of work
- Co-establish future direction of your area(s) of work

- Independently own projects from start to finish (with community input along the way!)

CCs contribute to the project in various ways and are granted certain rights, such as:

- **Working across the community to establish the future direction of the project, as well as maintaining and prioritizing work backlogs**
- **Growing the CC community by engaging with the selection process for new Core Contributors**

As a CC you have rights including:

- Ability to join regardless of organizational affiliation
- Right to join the program in more than one role
- Participate in the voting process of choosing new CCs
- Elevated access to systems your role needs to access, such as Reviewer access in Transifex, code review & commit rights to code repositories, or ability to change Open edX websites like the Marketing site
- Co-maintain prioritized backlogs of work
- Co-establish future direction of your area(s) of work
- Independently own projects from start to finish (with community input along the way!)

- Participate meaningfully in the project: Building new things is great, but just as important is **maintaining:** helping create our Open edX releases, reviewing each other's work, doing maintenance and upgrade work, and levelling up new members of the community by answering questions and providing mentorship
- **Time:** Ensure participation is guaranteed: organizations sign the Declaration of Commitment to the Program*, guaranteeing their staff members have time each month to devote to CC work.
- **Lead** by example: Reinforce the project's commitment to openness & inclusiveness
- **Participate:** As needed by your role, attend relevant working group meetings
- Learn and advocate for **standards** in your domain - ie code cleanliness and quality, sound architectural and product principles, comprehensive and professional documentation, and consistent translations
- **Communicate** effectively and fairly - don't privilege certain people or organizations
- **Community:** "If you see something, say something": report (and try to fix, where possible) problems and bugs, and flag conduct unbecoming of the project. Be welcoming and helpful to newcomers.

*
https://openedx.atlassian.net/wiki/spaces/COMM/pages/3216900524/Revised+Declarat

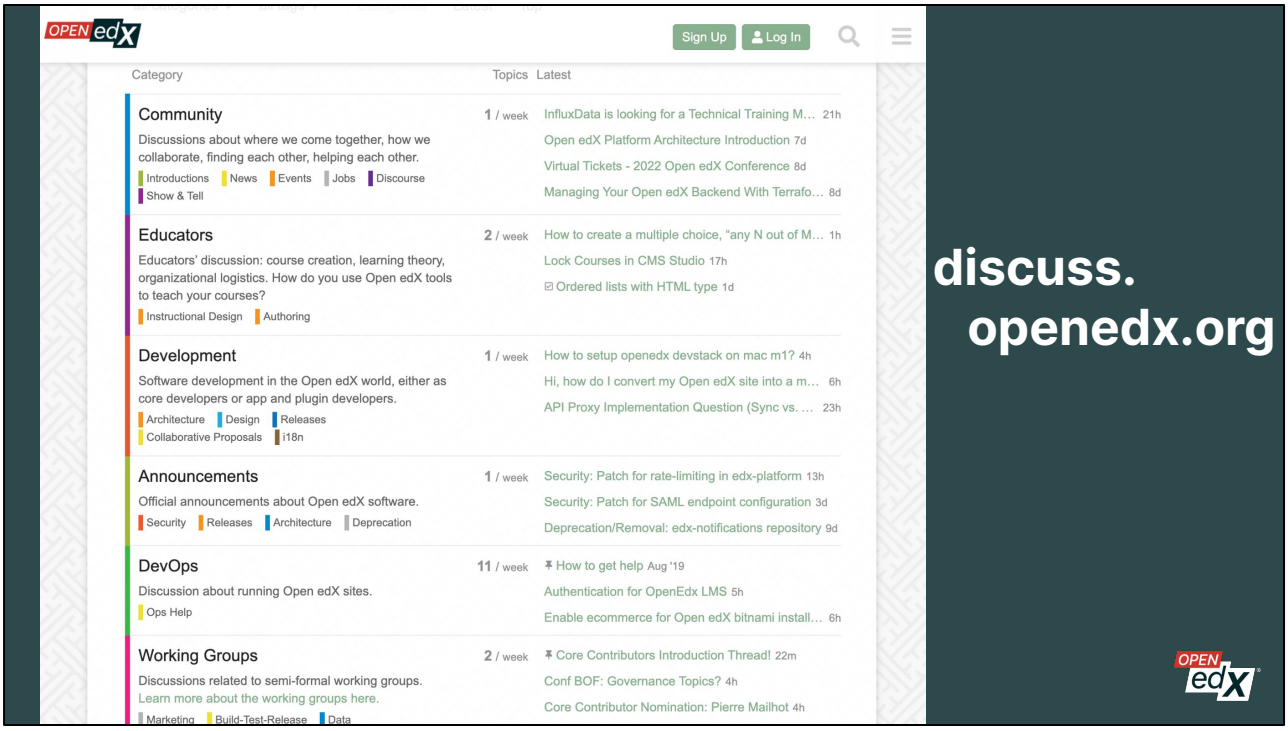
ion+of+Commitment+to+the+Core+Contributor+Program

core contributor

camaraderie!

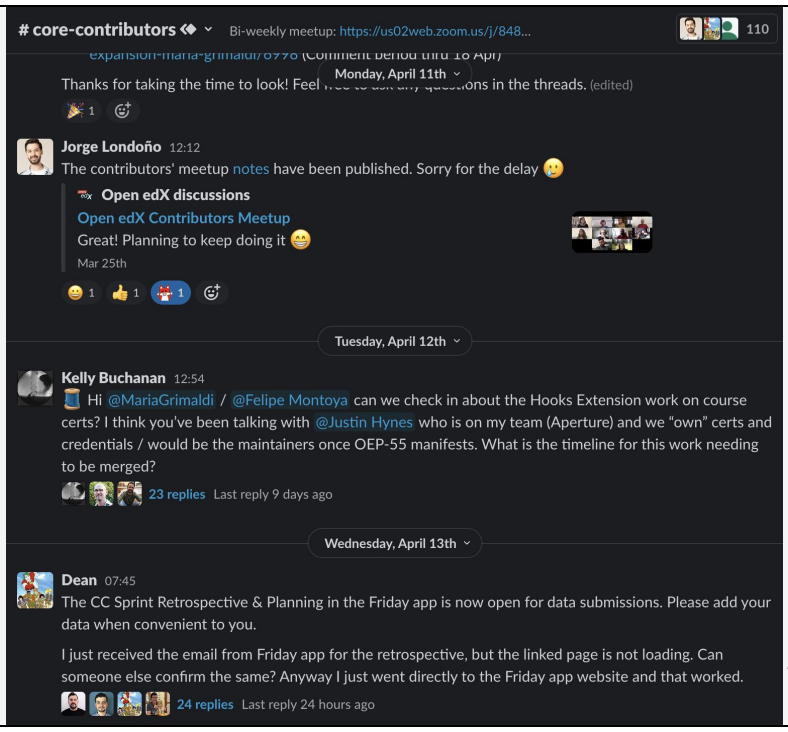
- Core contributors touch base with each other frequently to understand what everyone's working on and offer help
- Ccs also discuss how to assist and grow the community
- Ccs have significant influence over the direction of the project, as they've demonstrated a commitment to the project
- Ccs also interact with non-CCs! We love engaging with the community, mainly through our forums and our Slack. We would love if you'd jump into conversations with us and the wider community. Being social in the community is often an important step towards becoming a core contributor.

(shots - forums, slack, on separate slides)



Here's what our discussion forums look like - we have topics ranging from how to operate your own Open edX instance ("DevOps") to how to build a course ("Educators").

openedx.org/slack



Join us too in Slack for real-time discussion with developers, operators, educators, and core contributors of all types.

Contributing to the Project...

... why should I (or my organization) do it?

Individual benefits to contribution

-

- Improve technical skills
-

Work with a friendly community

- **world-wide** community
- Diverse & friendly

Collaboration & Leadership

- Collaborative leadership

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- through co-leading projects, co-designing solutions to problems, and working group participation

Mentorship & Feedback

- Get & give it

—----------

- Hone your ability to provide constructive feedback and effective mentorship

Help Humankind!

Image: https://giphy.com/gifs/pitchonfox-fox-3oz8xvPvKnjEYe50OI

Core contributing: even more benefits!

-

```
struct group_info init_groups = { .usage = ATOMIC_INIT(2) };
struct group_info *groups_alloc(int gidsetsize){
    struct group_info *group_info;
    int nblocks;
    int i;

    nblocks = (gidsetsize + NGROUPS_PER_BLOCK - 1) / NGROUPS_PER_BLOCK;
    /* Make sure we always allocate at least one indirect block pointer */
    nblocks = nblocks ? : 1;
    group_info = kmalloc(sizeof(*group_info) + nblocks*sizeof(gid_t *), GFP_USER);
    if (!group_info)
        return NULL;
    group_info->ngroups = gidsetsize;
    group_info->nblocks = nblocks;
    atomic_set(&group_info->usage, 1);

    if (gidsetsize <= NGROUPS_SMALL)
        group_info->blocks[0] = group_info->small_block;
    else {
        for (i = 0; i < nblocks; i++) {
            gid_t *b;
            b = (void *)__get_free_page(GFP_USER);
            if (!b)
                goto out_undo_partial_alloc;
            group_info->blocks[i] = b;
        }
    }
    return group_info;

out_undo_partial_alloc:
    while (--i >= 0) {
        free_page((unsigned long)group_info->blocks[i]);
    }
    kfree(group_info);
    return NULL;
}

EXPORT_SYMBOL(groups_alloc);

void groups_free(struct group_info *group_info)
{
    if (group_info->blocks[0] != group_info->small_block) {
        int i;
        for (i = 0; i < group_info->nblocks; i++)
            free_page((unsigned long)group_info->blocks[i]);
    }
    kfree(group_info);
}

EXPORT_SYMBOL(groups_free);

/* export the group_info to a user-space array */
static int groups_to_user(gid_t __user *grouplist,
            const struct group_
```

ACCESS GRANTED

- Trust
- Edition or merge rights
- Facilitates integration of work in official project

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- - Get additional rights and permissions in your areas of expertise within the project, such as

Dedicated Time

- Get dedicated time guaranteed by your organization to contribute to the project & its community

Join the core team

- Bi-weekly sprints
- Help on blockers
- Visibility on work

Recognition & Status

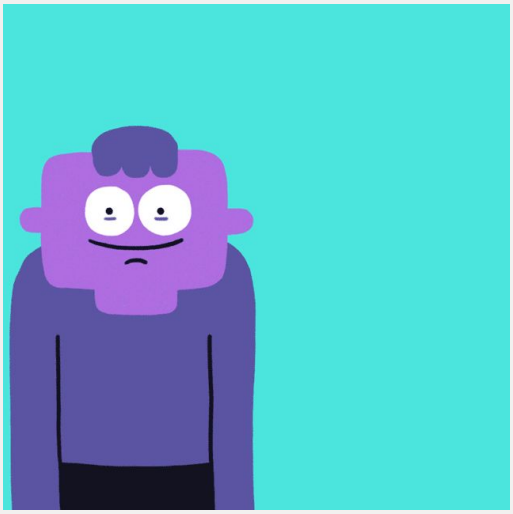
- Official status
- Recognized as key project staff member
- Put on CV

Organizational benefits

Contributing benefits your organization:

- Get your changes merged upstream, so you don't have to rework it for each release! Instead, once part of the official project, the rest of the Open edX development keep your work into account when developing new features
- Show the whole community your commitment to the project's success
- Build strong relationships with other Open edX organizations
- Get new prospects from community members who use the features you contribute to the platform, and are looking to customize or add to them

Avoid duplicate work



- Stay on top of changes
- Know early when others make similar changes
- Avoid release upgrades work

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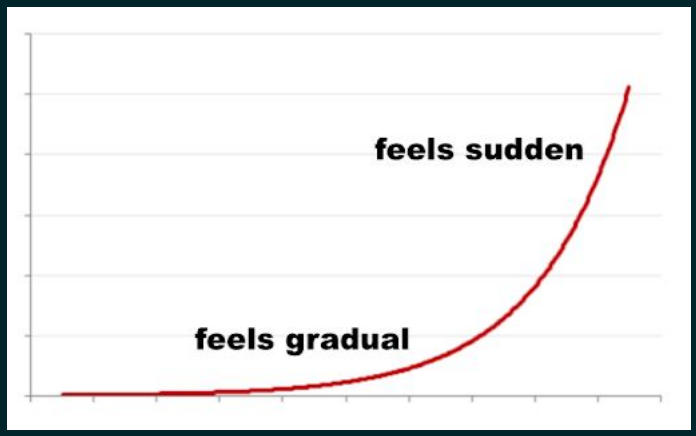
- Contributing allows you to also stay on top of newer changes being worked on or planned - someone else might also already be working on a similar feature, and if you announce your intent to contribute something similar, the reviewers will let you know about it. Saving time, and giving you an opportunity to influence the development of the feature that interests you, through the contribution of reviews, or changes.
- You will also be able to make sure your developments take into account the developments done since the last release when you develop your own feature

Image:
https://giphy.com/gifs/greggunn-animation-character-mythical-TIK63EA6F1qRb7Ill6M

Escape the code drift trap



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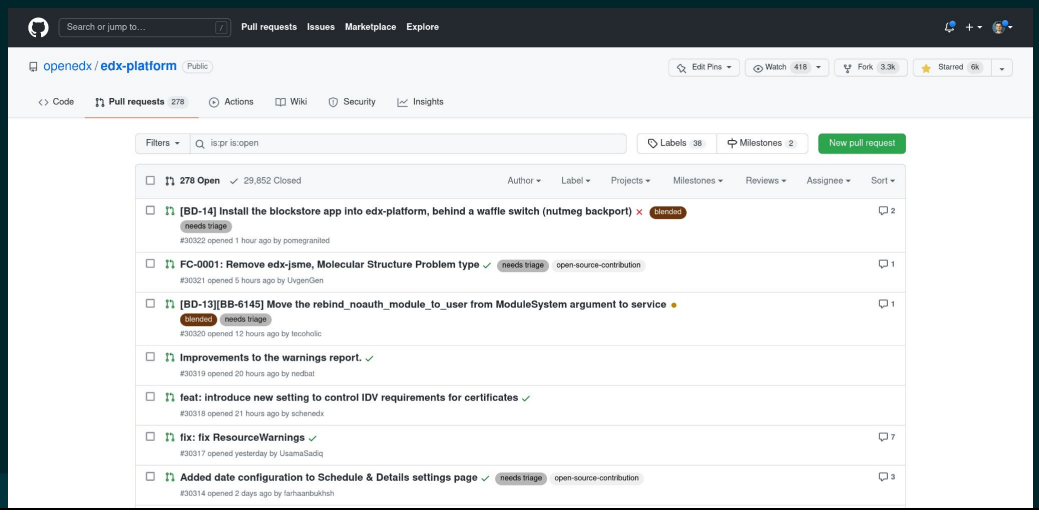
- The tricky bit in terms of perception of the important of this issue is that at the beginning, this burden is fairly light - it **looks like something small** enough to be manageable.
- But the nature of the exponential growth is that the increase feels very **slow at first, but then it feels like it increases very quickly**
- Advices to pay attention to this are often discarded, unless people or managers in the team have **been through the experience once**

Get contributions



- Merged work gets **advertised**
- Others will **use** and **improve**

- Once the feature is in the main release, you effectively advertise your work - more people will use it than if you simply keep it on your own repository
- Which means that, in turn, others might have the need to improve further upon the change for their own needs - and you will benefit from the changes, which will simply appear in the following release, without having to keep track of them, or go get them in other people's repositories

Employees as core contributors

Obtain core contributor status for your employees adds even more benefits:

Branding

- Demonstrate technical excellence

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- work accepted by the project has high technical and UX standards

Gain influence

- Demonstrate to clients
- Can advocate for perspective

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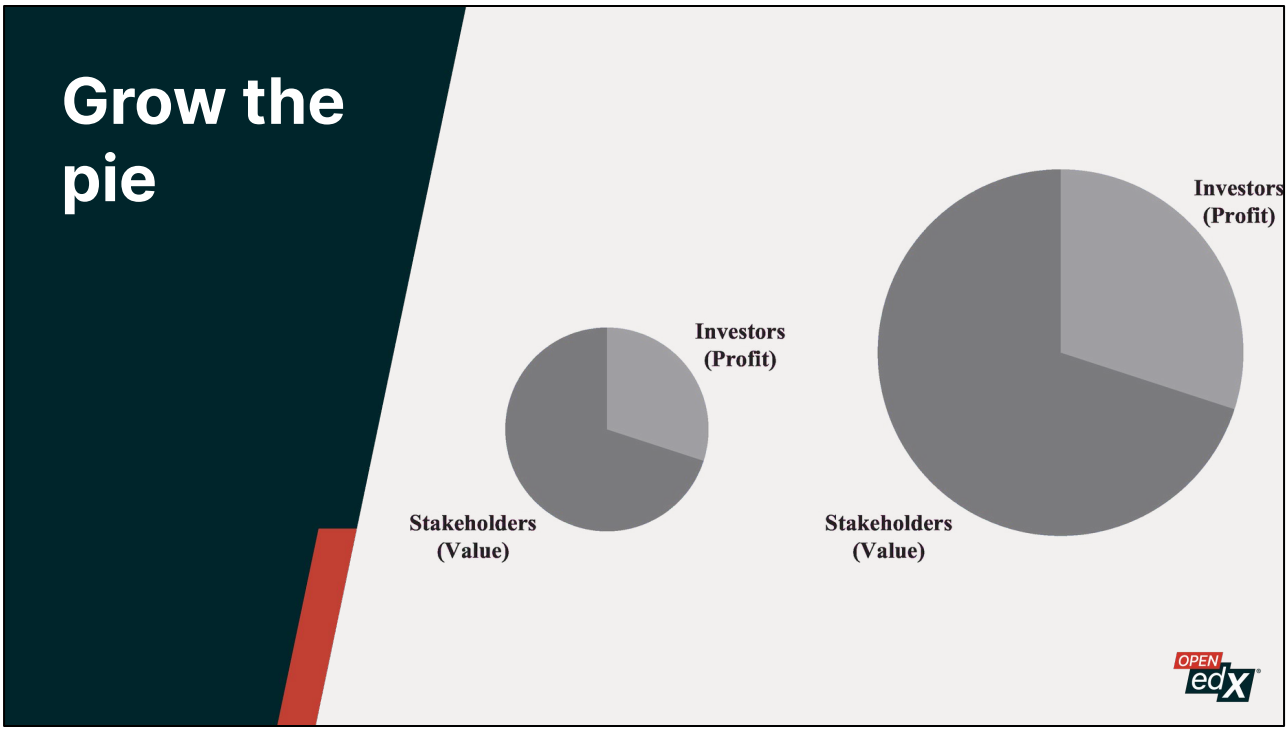
- that you have influence over the direction of the project, and can advocate for their perspective
    - *Influence the direction of the project with input from your perspective*



- Improve foundations: upkeep of the codebase, translations, product roadmap, etc
- Ensure project covers use cases
- => grow the user base

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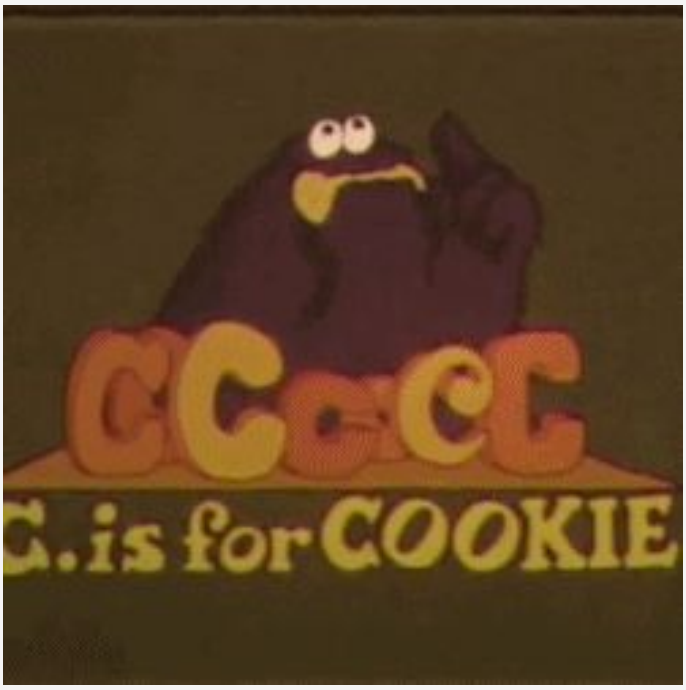
- Strengthen the foundation of the community (basic upkeep of the codebase, translations, product roadmap, etc), discover common goals, build collaborative solutions, learn from mistakes already made, and ensure the Open edX project continues to grow and reach millions of learners.

OK, I’m convinced

... how do I sign up?



- Core contributors are chosen on the basis of their ability to demonstrate the “3 C’s”: commitment, conduct, & caliber
- Core contributor status is not something you sign up for, rather, it’s something you earn through repeated demonstration of the 3C’s via participation in and contributions to the public Open edX project.

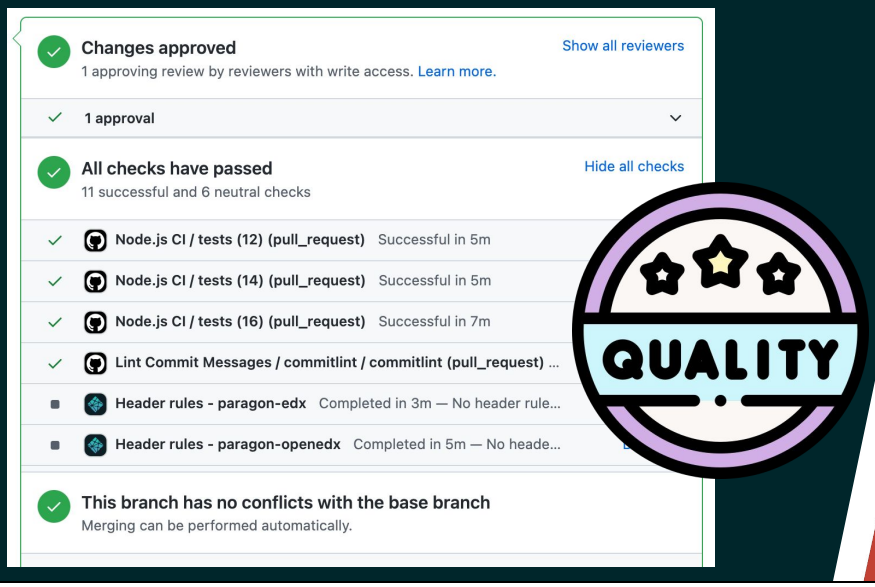
commitment!

- **Commitment: Are you able to spend focused time on the public Open edX project on a regular basis?**

conduct!

- **Conduct: When interacting with other members of the community, is your conduct consistent with the Open edX code of conduct, and are you open, friendly, and welcoming? When you receive constructive feedback, do you listen to it? Do you take it as a learning opportunity and a way to level up?**

caliber!



- **Caliber: Are your contributions to the public Open edX project ones that consistently meet the bar of excellence in your given area? For example, is your code clean and tested? Do your translations meet project standards? Is your documentation written in professional English and accurately describe facets of the project?**
  - When seeking Core Contributor status, it will be important to be able to point towards examples of your work

How does one go about demonstrating the 3 C's?

- **Jump in to contributing** to the project! Core contributors show sustained commitment to the project by contributing consistently over time, and demonstrate the caliber of their work by providing high quality contributions
- It's important to **participate in the community** as well, to showcase your conduct: do you uphold the code of conduct and contribute to fostering an open, welcoming community?

openedx.org/working-groups

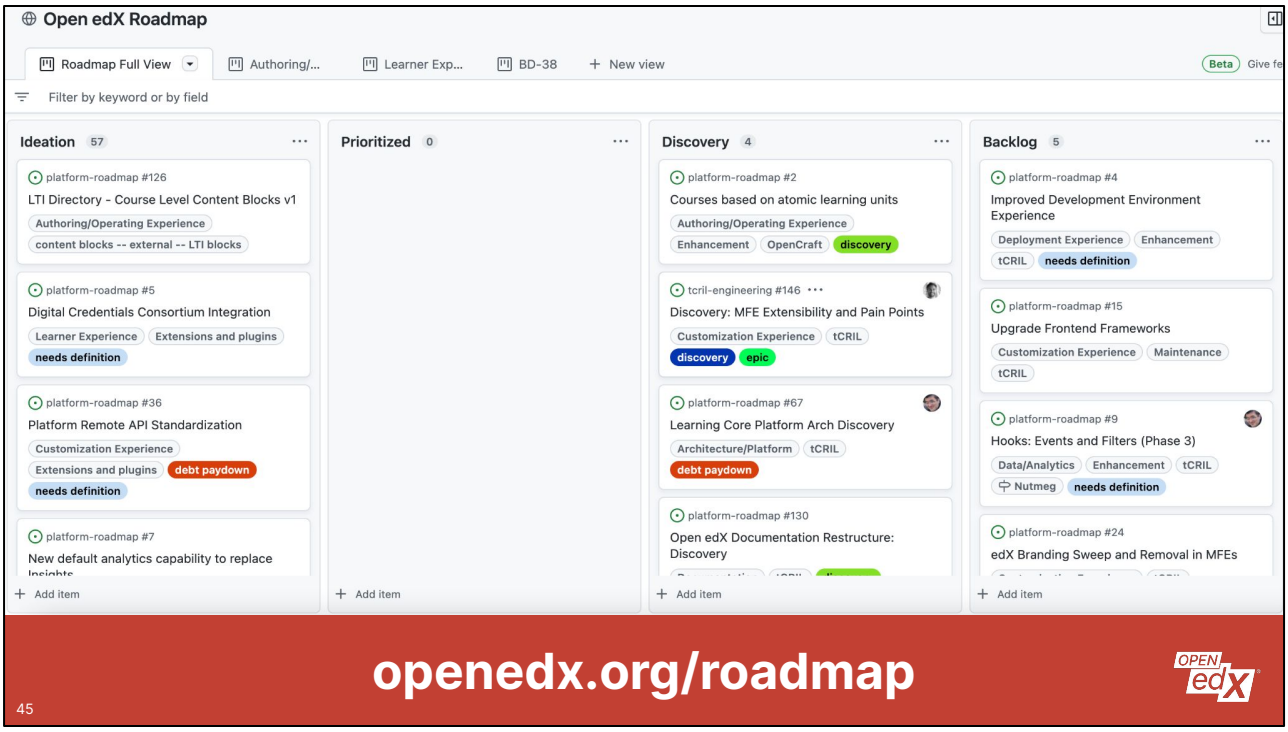
Join a **working group**! This is a great opportunity to meet members of our worldwide community and find out what people are up to. Often, working groups will have defined tasks you can pick up.

Currently **6 active,** with more on the horizon

provide help & feedback

Help out wherever you can!

Provide **help & feedback** where applicable to your role. This could be responding to forums posts, providing review or feedback on code pull requests or documentation, participating in design of new features (coders, product managers, UX, and even users are helpful in the design process!). You don't need to be a Core Contributor to provide valuable feedback, and in fact, providing good feedback will help the community notice you as a great collaborator.



Check out the roadmap https://openedx.org/roadmap

See Jenna's lightning talk (was 1400 Thurs)

Pick up work that you see is needed, such as bugfixes or new feature work. Note that you'll make a stellar impression by reaching out to the community first, to verify you're doing something the community will want to accept and get feedback on your approach.

COMMUNITY CONTRIBUTE

Contribution process

We welcome contributions to the Open edX code base. You should start by working with the community and the edX Open Source team early, before writing any code. They can help you define requirements, understand the roadmap, and find collaborators.

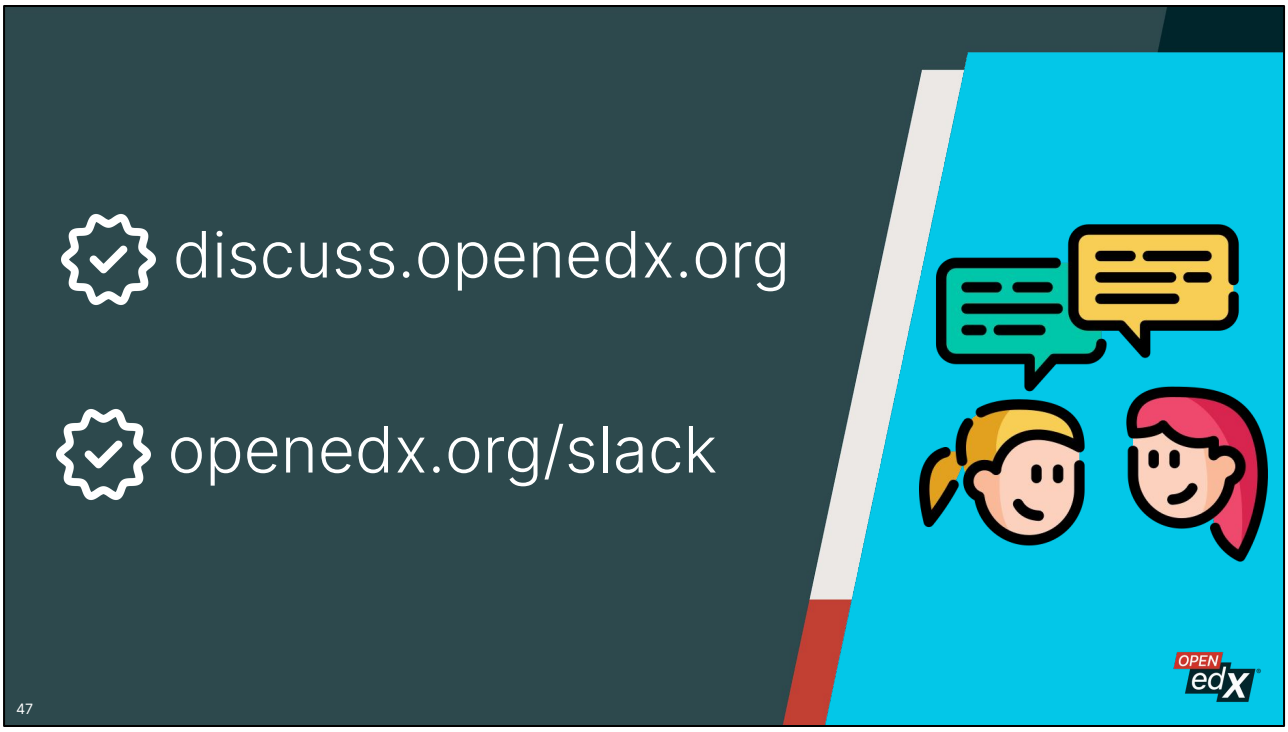
Our detailed process documentation explains the entire workflow. Understanding these steps will help maintain the highest code quality standards, and make integrating your changes as smooth as possible.

To get going as a code contributor, use this documentation. You will need to complete an individual contributor agreement before submitting a pull request. Your changes will be triaged and reviewed by Open edX committers. This process can take some time. Be patient, and keep the lines of communication open.

If you have any questions, connect with the community on our Forums or Slack.

openedx.org/contributing

How to get up and running with contributing: https://openedx.org/contributing



- Ask for help and advice along your journey! Reach out in the forums to express your interest and get guidance on next steps

if they post on the forum that they would like to become a core contributor, we can guide them on the next steps. Ie which work to pick, a review of what would be missing in their profile to be nominated/accepted as core contributor, etc.

That might give something more concrete to do, and on our side we might notice people willing to contribute that we didn't know about?

- Go through the nomination process (you do good work! Others notice! They nominate you for a position, publicly on the forums! Whole community can give input, but only other CCs make the final decision)
    - Why do we do this publicly? Transparency - community should know who has a hand in guiding the community and its direction, and should be able to provide input
- Go through what happens when you are accepted (added to the program, given expanded rights & responsibilities)
- Go through what happens if you are not accepted (you should receive feedback, from people in the forum post as well as the person who nominated you, as to why you're not quite ready to be a CC - and how you can work to become one in the future!)

Read https://open-edx-proposals.readthedocs.io/en/latest/processes/oep-0054-core-contributors.html for more information

- If you have any questions or concerns
  - Can check out OEP-54 (explain what OEP is)
  - Can talk to any CC anytime at the conference (find us by these shirts!) or in the Open edX Slack
  - Post in the Core Contributors section of the forums!
  - Can email program admins with any questions or concerns that are of a private/sensitive nature at cc-program-admins@tcril.org
  - Can reach out to sarina@tcril.org or xavier@opencraft.com if none of the above work!

Thank You!

... please ask us questions!

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