

Current trends in the C++ Community

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Italian C++ 2020

Introduction



- * '81
- C++ since '98
- was a C++ Freelancer
- Meeting C++
- C++ Evangelist
 - Supporting C++ Community
 - Social Media
 - global Network for C++

New @ Meeting C++

Trainings @ Meeting C++

- Meeting C++ 2020
 - Planning phase begins...
- Newsletter
 - Meeting C++
 - Weekly Blogroll

Meeting C++ Community Survey

- Take the survey here:
 - <https://survey.meetingcpp.com>

People



C++

Goals of this talk

- Give an overview
 - C++ usage statistics
 - Other statistics

Meeting C++ Community Survey

- Take the survey here:
 - <https://survey.meetingcpp.com>
 - 60+ Questions
 - 50 Minutes for this talk...

Other Surveys

Annual C++ Surveys

- Isocpp.org
 - 2020
- JetBrains
 - 2019
 - 2020 ongoing?

Third Annual C++ Foundation Developer Survey "Lite"

By Blog Staff | Apr 5, 2020 09:14 PM | Tags: None

Note: Given the pandemic, we weren't sure whether to run our annual survey now at all. Thank you very much to the several hundred people who gave their feedback on our poll about that... you overwhelmingly encouraged us to go ahead, and so here we are trying to do it. We look forward to your responses and insights, but most of all we want to send our best wishes to all of you in our global C++ community and your families and loved ones; C++ has always enjoyed a cohesive global community, and never more so than now as we are all going through this dreadful shared experience together in virtually all countries. Please be safe, everyone.



The Standard C++ Foundation's third annual global C++ developer survey is now open. As the name suggests, it's a one-pager:

2020 Annual C++ Developer Survey "Lite"

Please take 10 minutes or so to participate! A summary of the results, including aggregated highlights of common answers in the write-in responses, will be posted publicly here on isocpp.org and shared with the C++ standardization committee to help inform C++ evolution.

The survey closes in one week.

Thank you for participating and helping to inform our committee and community.

Key takeaways and Fun facts

Java

C

Demographics and Methodology

C++

C#

Raw data

Go

How many attend?



Meeting C++
@meetingcpp



Have you attended a C++ User Group meeting?

#cpp

#cplusplus

#Thursdaysurvey

Yes

33%

No

67%

213 votes · Final results

How many attend?



Meeting C++
@meetingcpp



Have you attended a C++ Conference?

#ThursdaySurvey

#cpp

#cplusplus

Yes

30%

No

70%

433 votes · Final results

Combining these polls...



Meeting C++
@meetingcpp



Did you attend a C++ User Group meeting and/or C++ Conference?

#cpp

#cplusplus

Attended C++ UG & Conf ✓

24%

Attended C++ Conference

16%

Attended C++ User Group

9%

Neither

51%

173 votes · 3 hours left

Meeting C++ Community Survey

- 2020
- Continuous Survey
- Questions
 - Single & Multiple choice

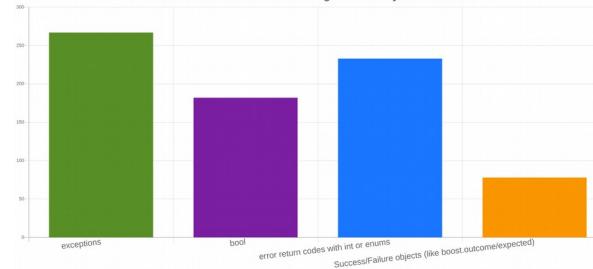
Whats the choices of error handling are used in your code base?

exceptions
 bool
 error return codes with int or enums
 Success/Failure objects (like boost.outcome/expected)

Skip this question

Submit poll

Meeting C++ Community Survey
Whats the choices of error handling are used in your code base?



Technical Details

- Session based
 - Logged in
 - Just voting
- New features
 - Combining of Questions
- Planned features
 - Time based reporting
(m/q/y)
- Saving votes as
 - Aggregate
 - $\{\{0:1\},\{1:2\}\}$
 - Vote
 - Date
 - Session

Technical Details

- Answers
 - Locked for 30 days
 - Skip for 60 days
- Reanswering the question
 - Does not add to the aggregate

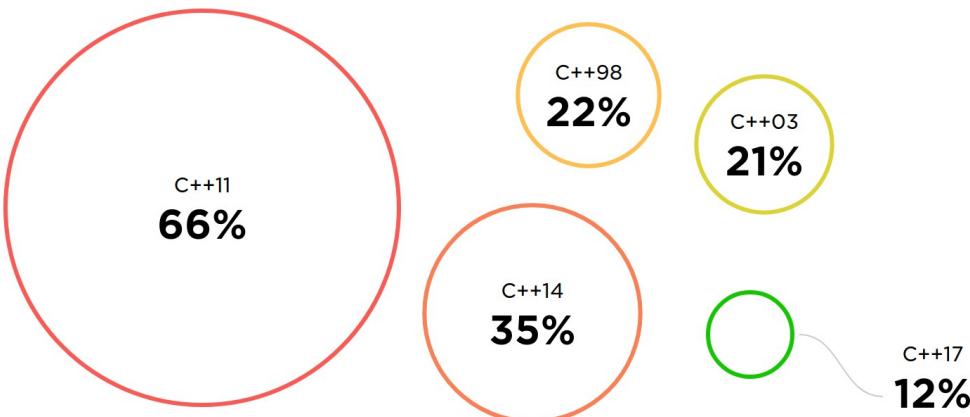
Technical Details

- Finding the right Questions
- ... and answers!
- Is an art form.

Case study: C++ Standard adoption

C++ (Jetbrains 2017)

Which C++ standards do you regularly use?



46%

don't plan to move to a newer C++ standard.

62%

of those using older standards (C++ 98 and C++ 03) are moving to modern C++ standards.

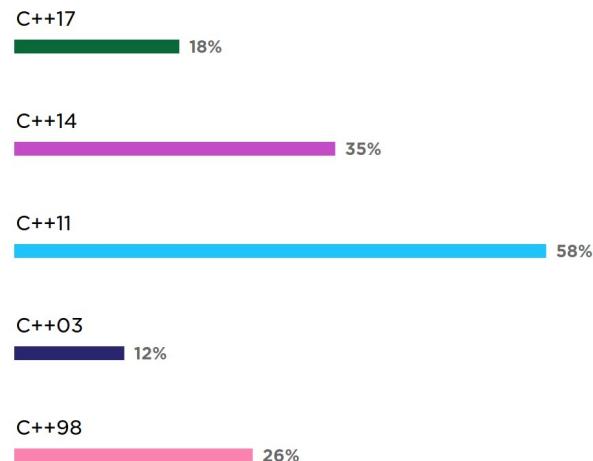
25%

of C++ developers are planning to move to C++17.

C++ (Jetbrains 2018)



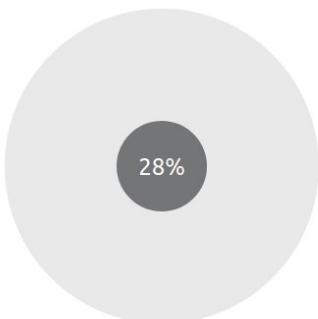
Which C++
standards do you
regularly use?



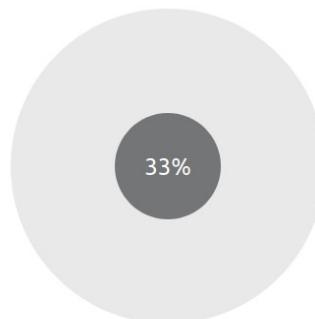
Question with checkboxes. Sum of shares may be more than 100%.

C++ (Jetbrains 2019)

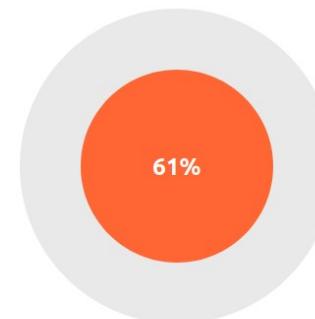
Which C++ standards do you regularly use?



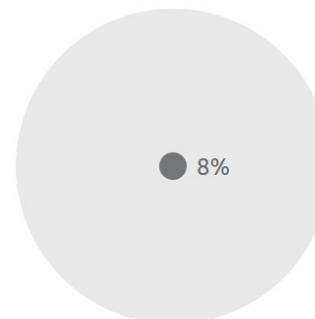
C++17



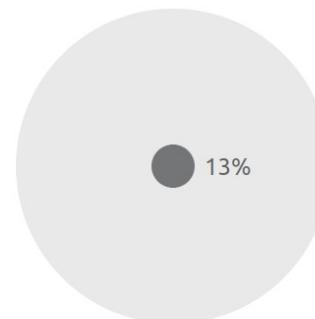
C++14



C++11



C++03

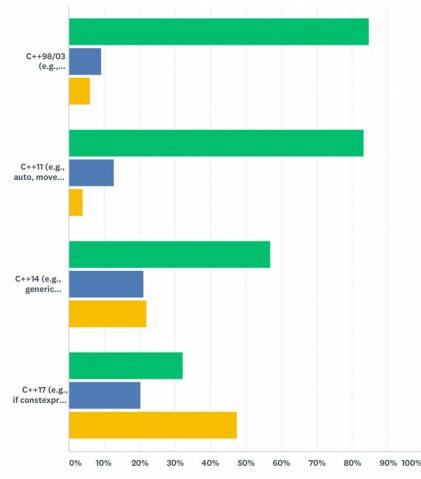


C++98

C++ (ISOCPP 2018)

What version(s) of C++ are you allowed to use on your current project (work or school)?

Answered: 3,257 Skipped: 29

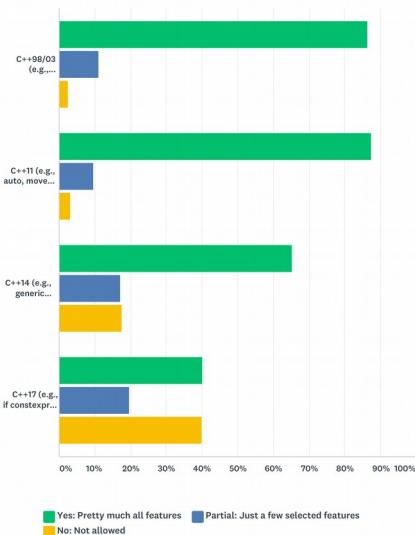


- Not the same but similar question

C++ (ISOCPP 2019)

What version(s) of C++ are you allowed to use on your current project
(work or school)?

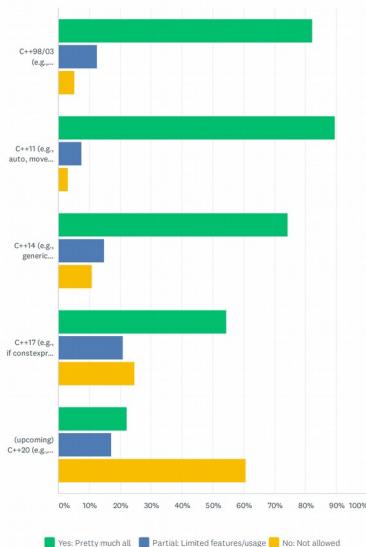
Answered: 2,134 Skipped: 22



C++ (ISOCPP 2020)

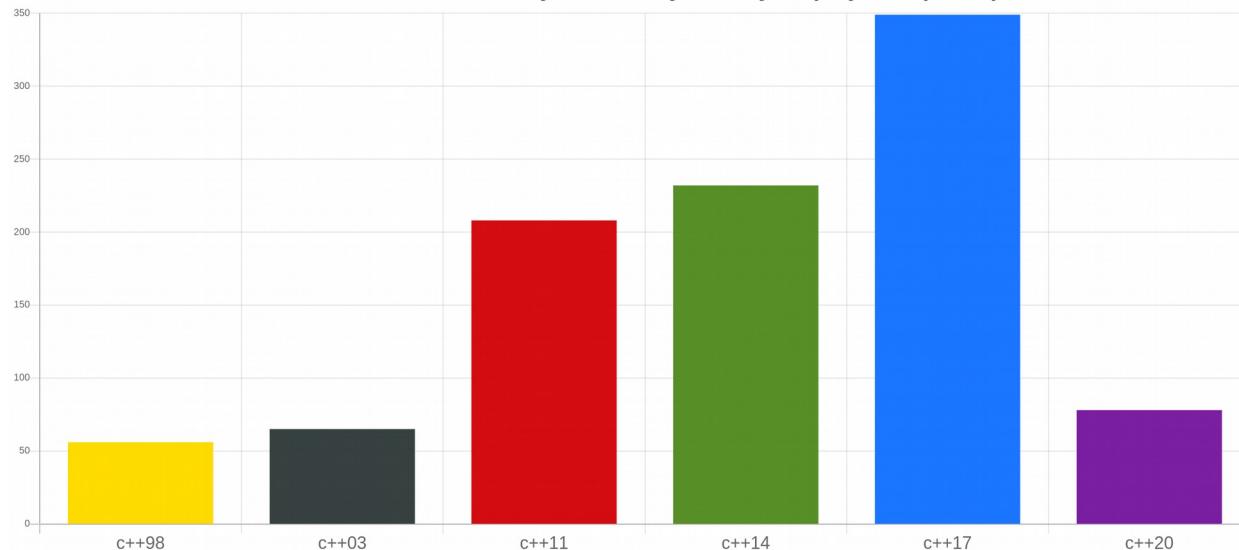
What version(s) of C++ are you allowed to use on your current project (work or school)?

Answered: 1,025 Skipped: 10

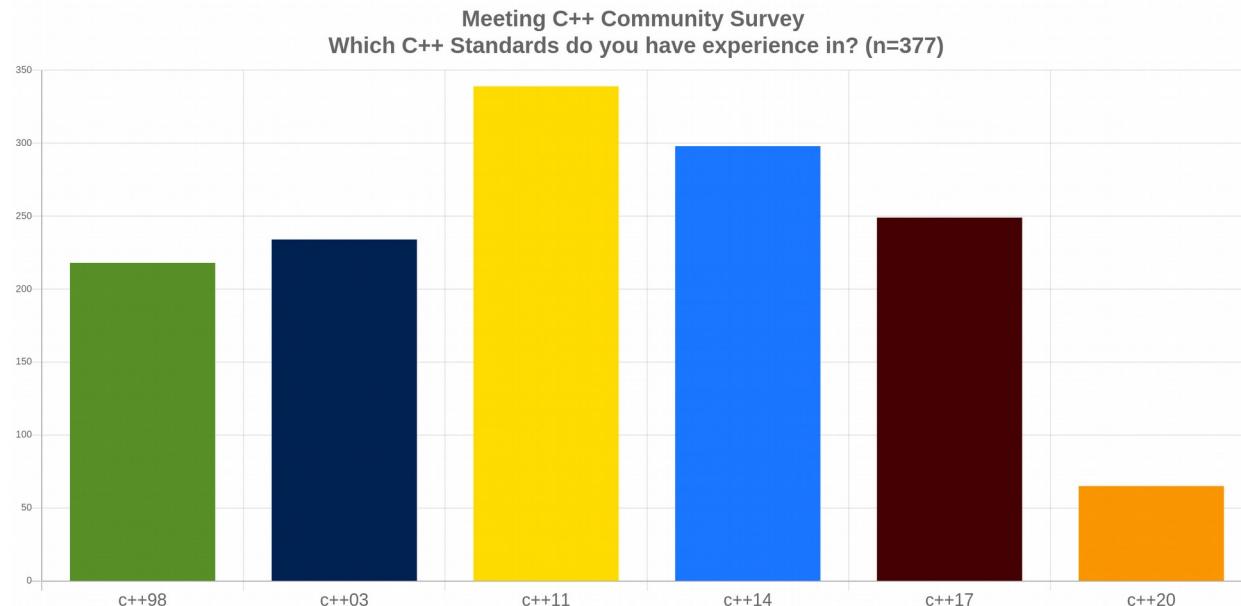


C++ usage

Meeting C++ Community Survey
Which C++ Standards do you currently use in your projects? (n=533)

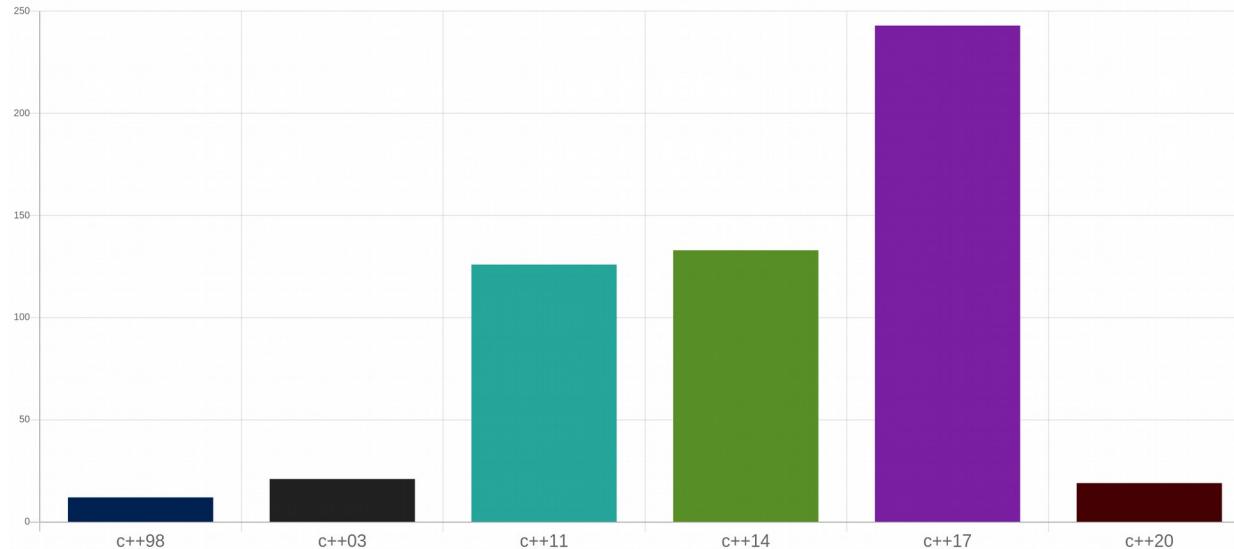


C++ experience



C++ Standards in use

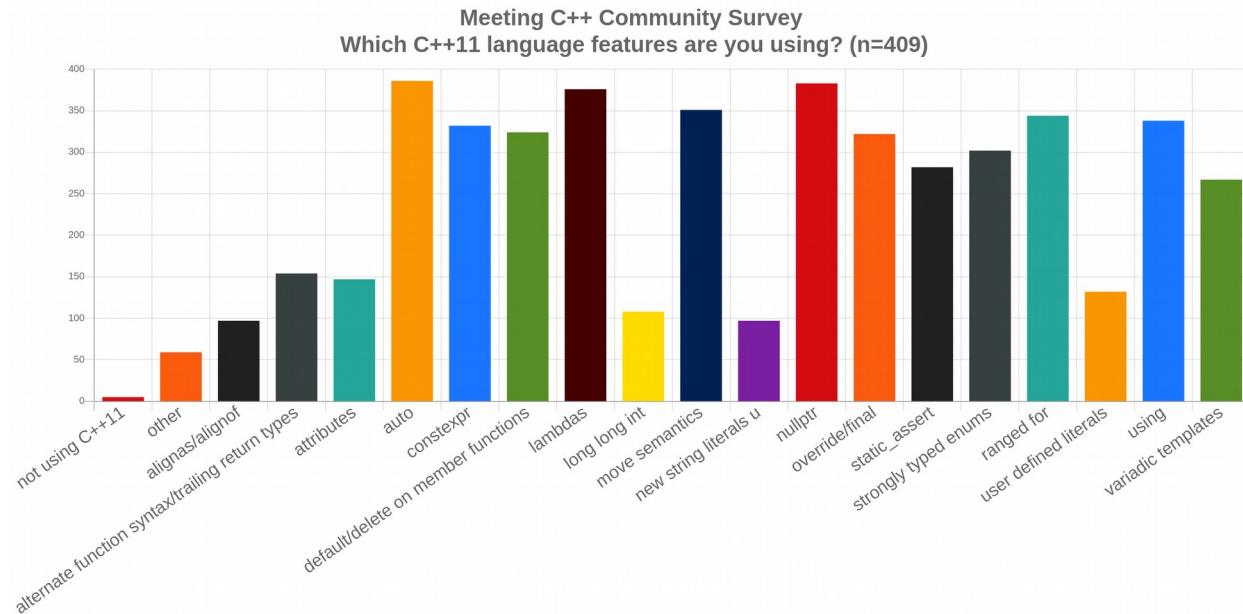
Meeting C++ Community Survey
Which C++ Standards do you use the most at work currently? (n=550)



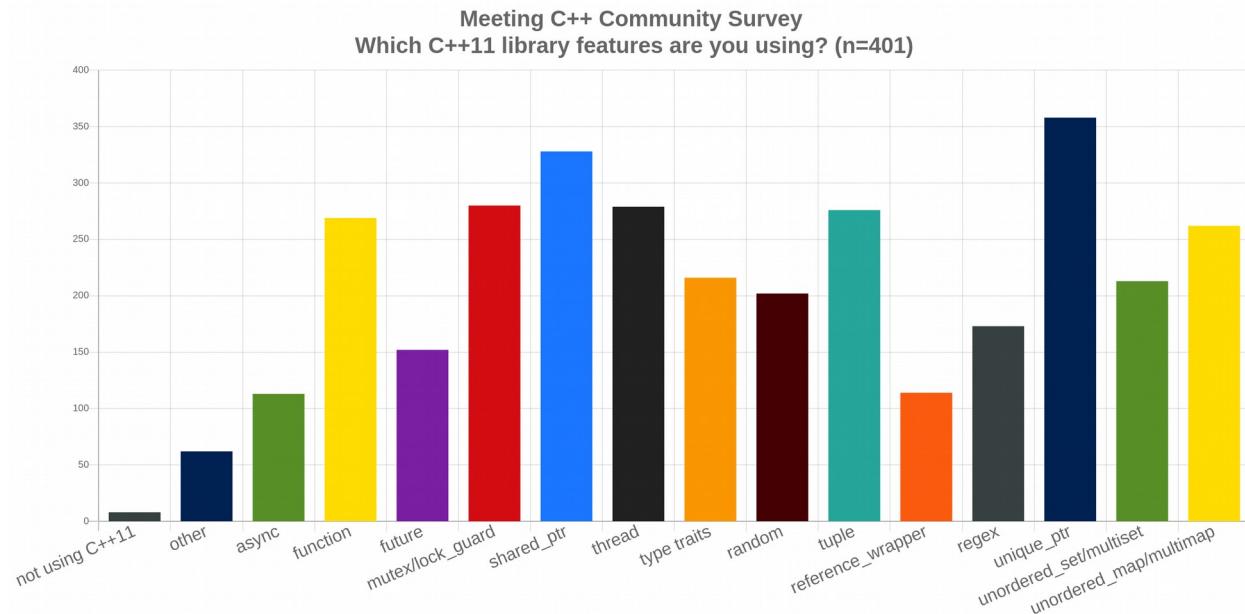
What about the Standard details?

- What features are actually used?
 - C++11 – C++17
 - Language
 - Library

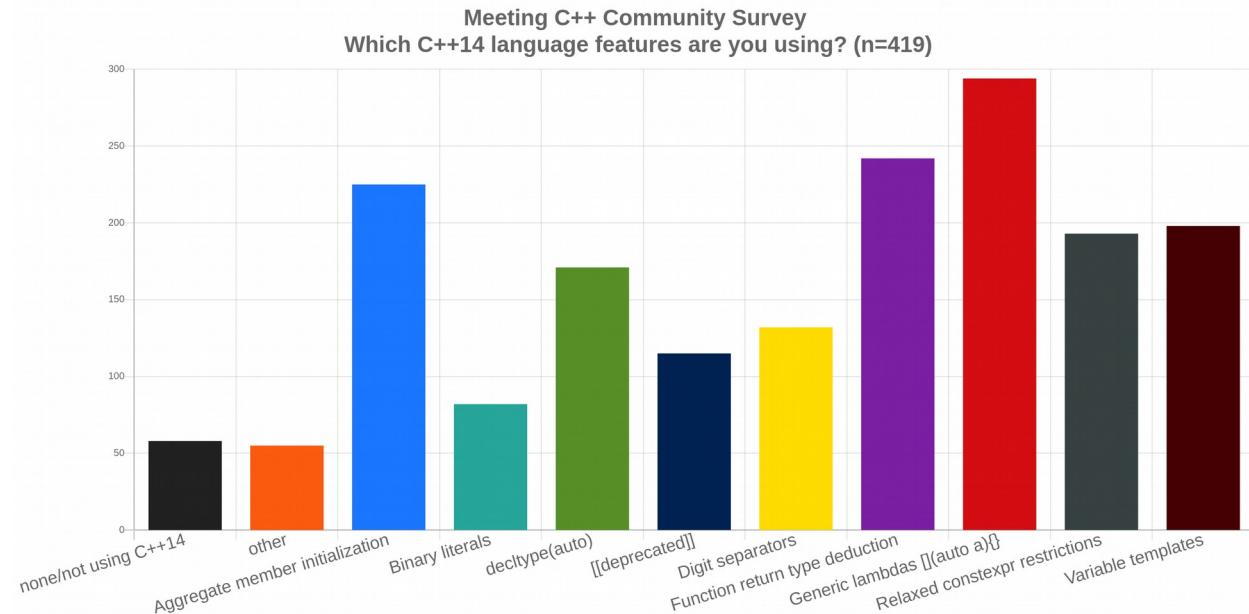
C++11 – language features



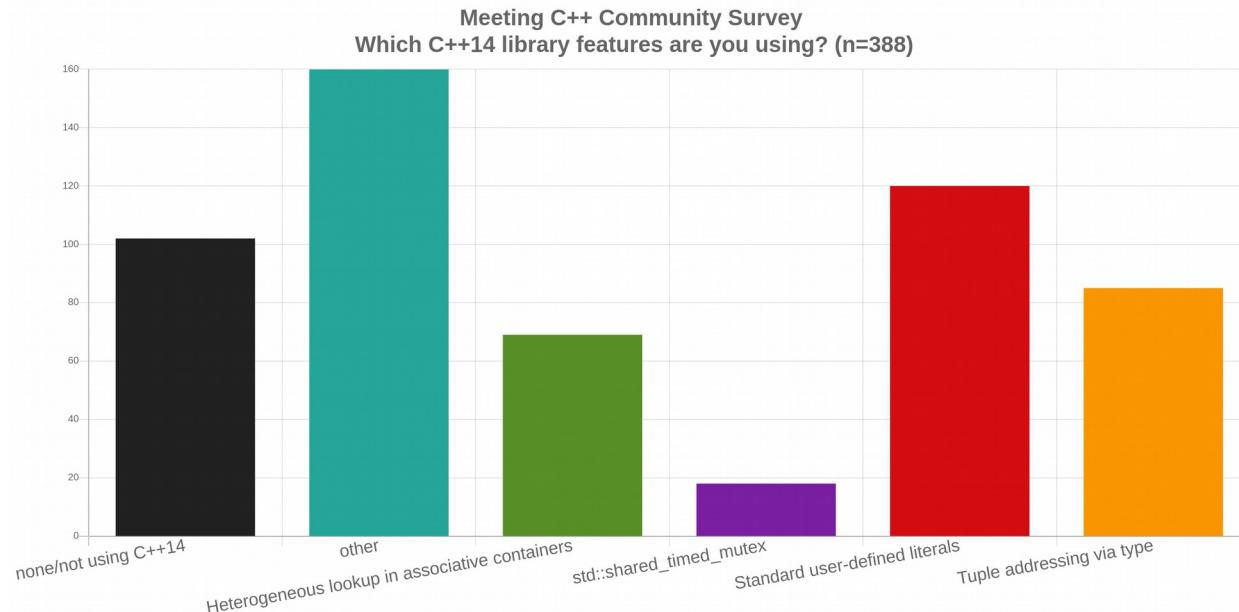
C++11 – library features



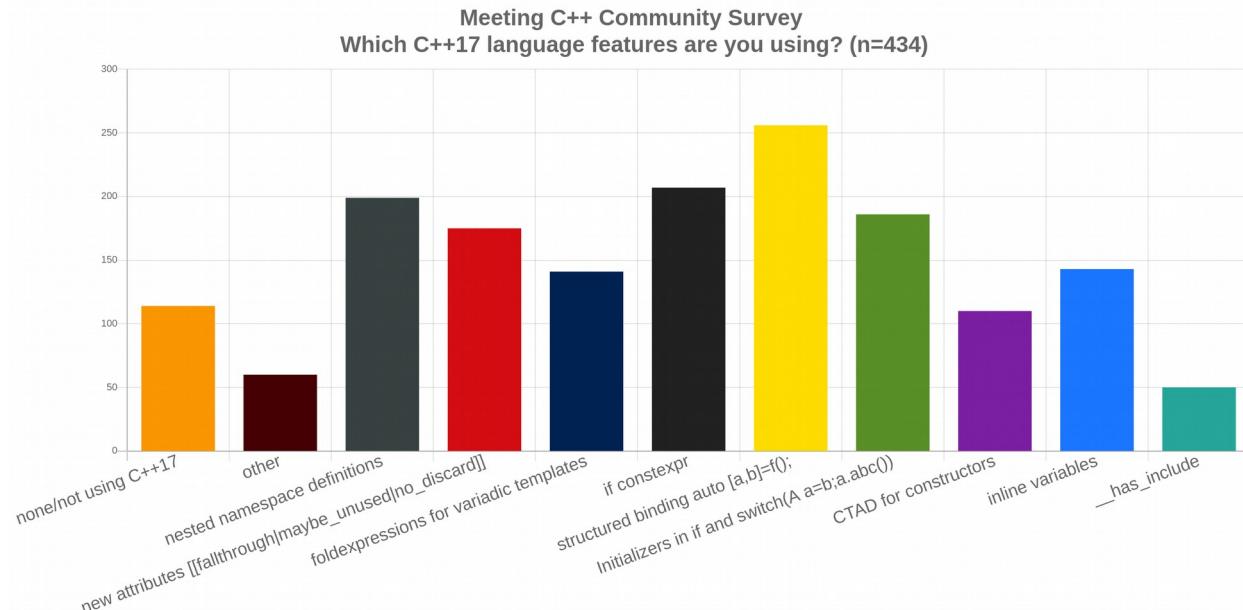
C++14 – language features



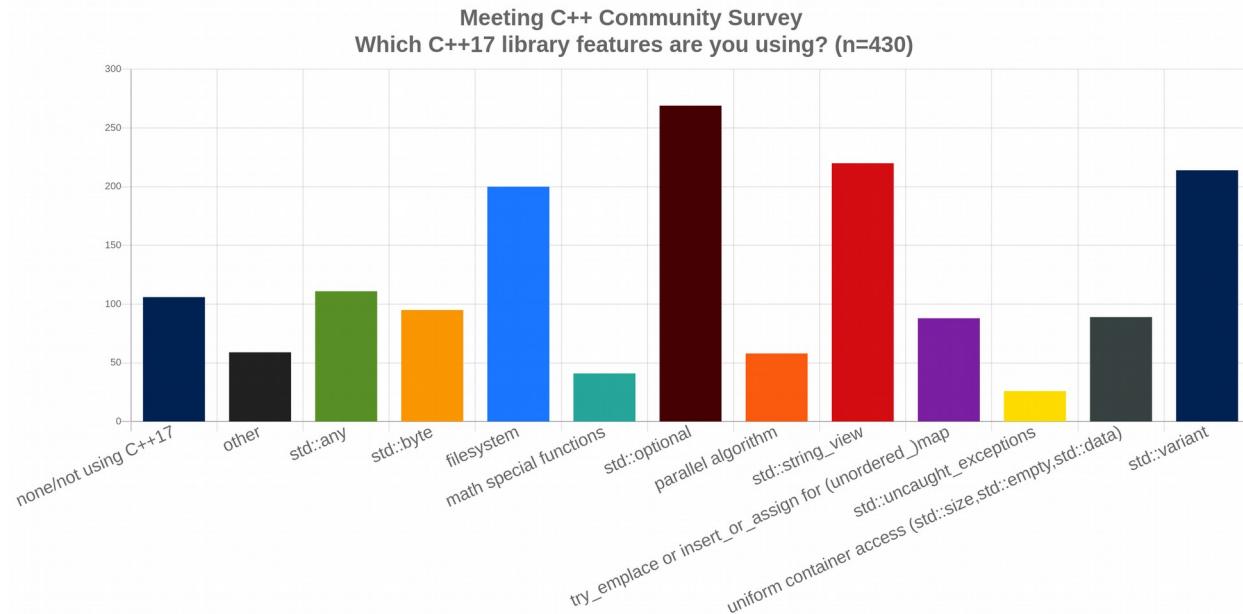
C++14 – library features



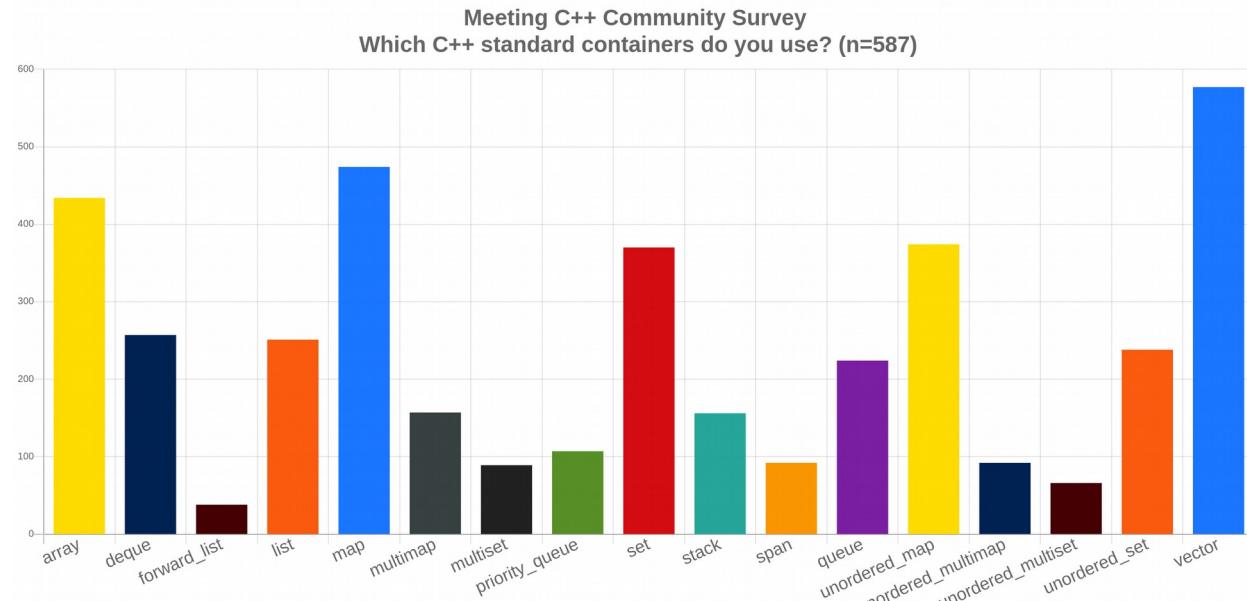
C++17 – language features



C++17 – library features

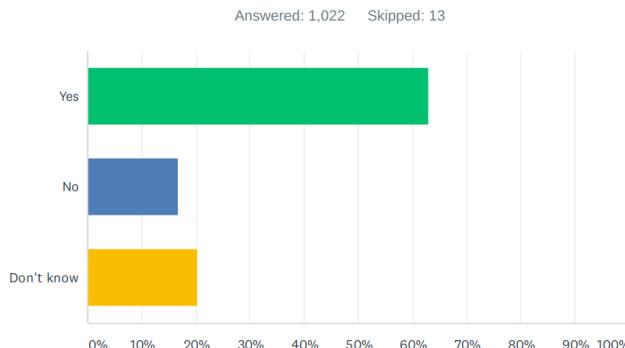


What about std::containers?

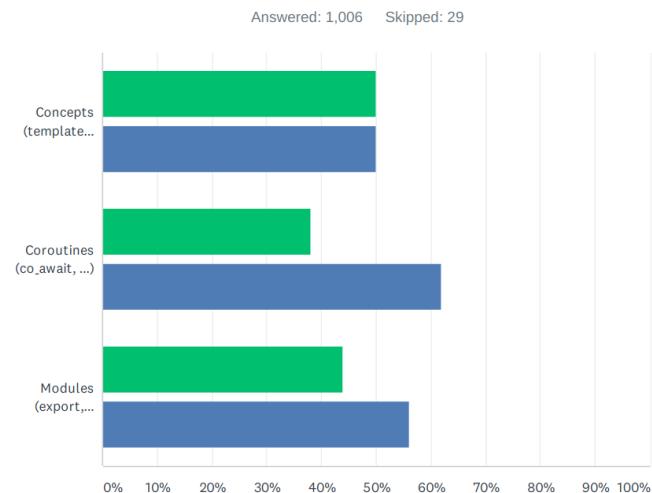


Moving forward

Q12 In the next 12 months, does your current project plan to start allowing additional use of newer C++ standard features (i.e., more than in the previous answer)?

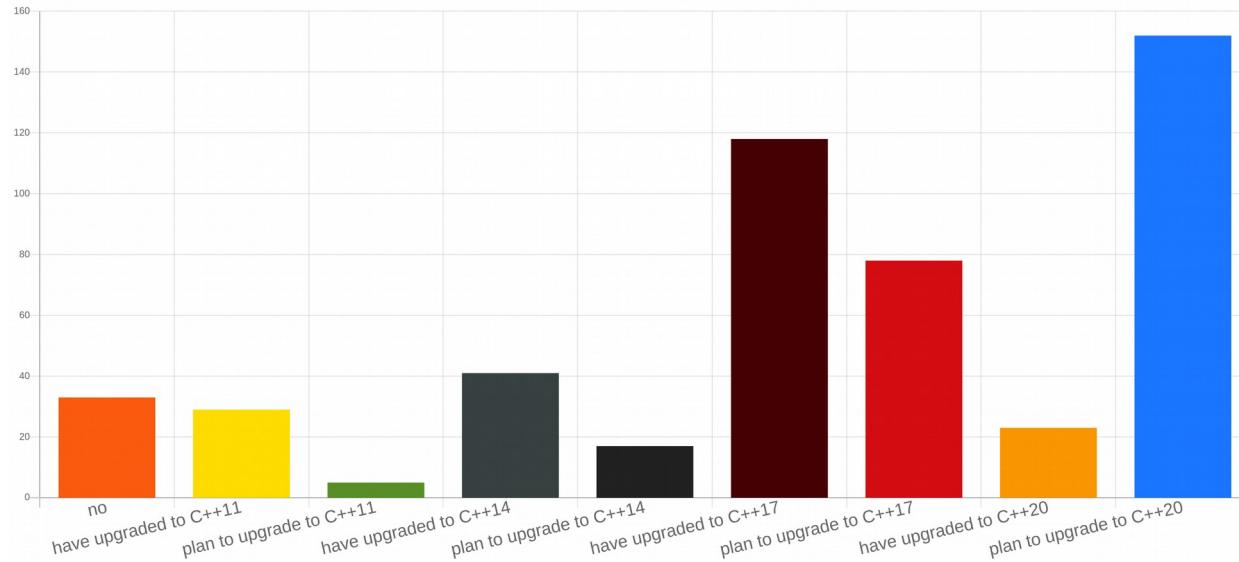


Q13 Specifically for upcoming major C++20 features: In the next 12 months, does your current project plan to allow use of these draft C++20 features?



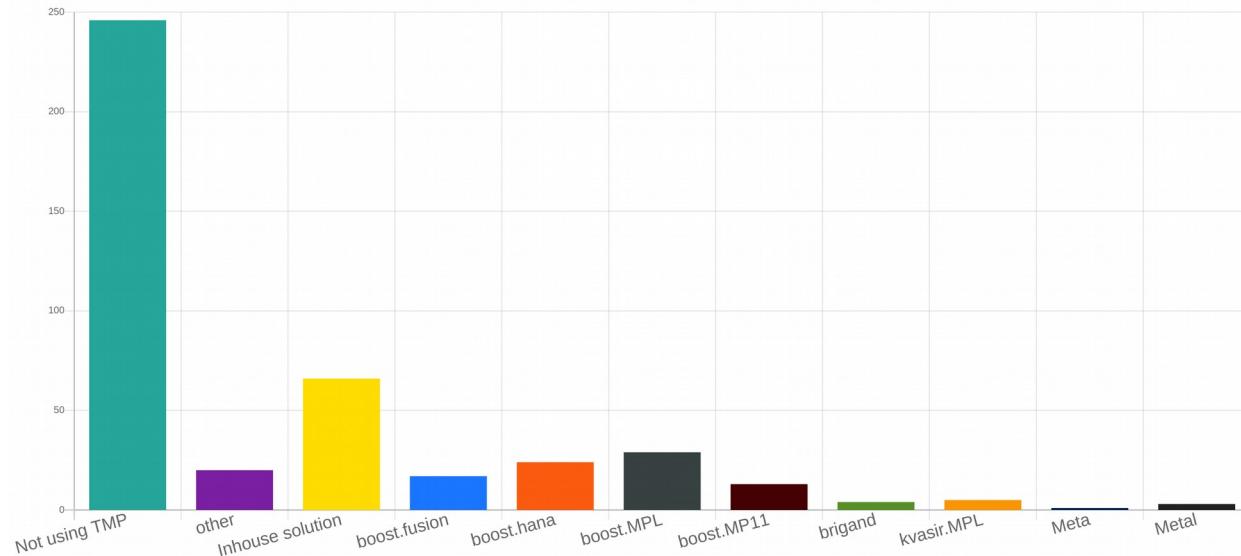
Moving forward

Meeting C++ Community Survey
Have or will you be upgrading to a newer C++ standard in the last/comming year? (n=354)



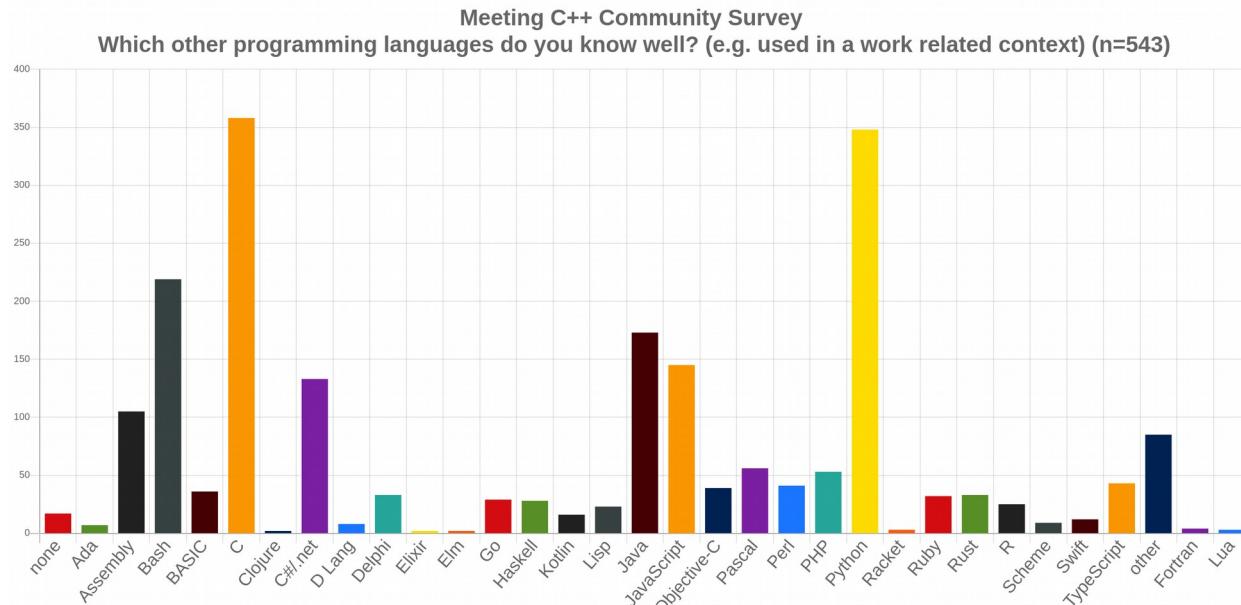
TMP...

Meeting C++ Community Survey
Which TMP libraries do you use in your code base? (n=372)

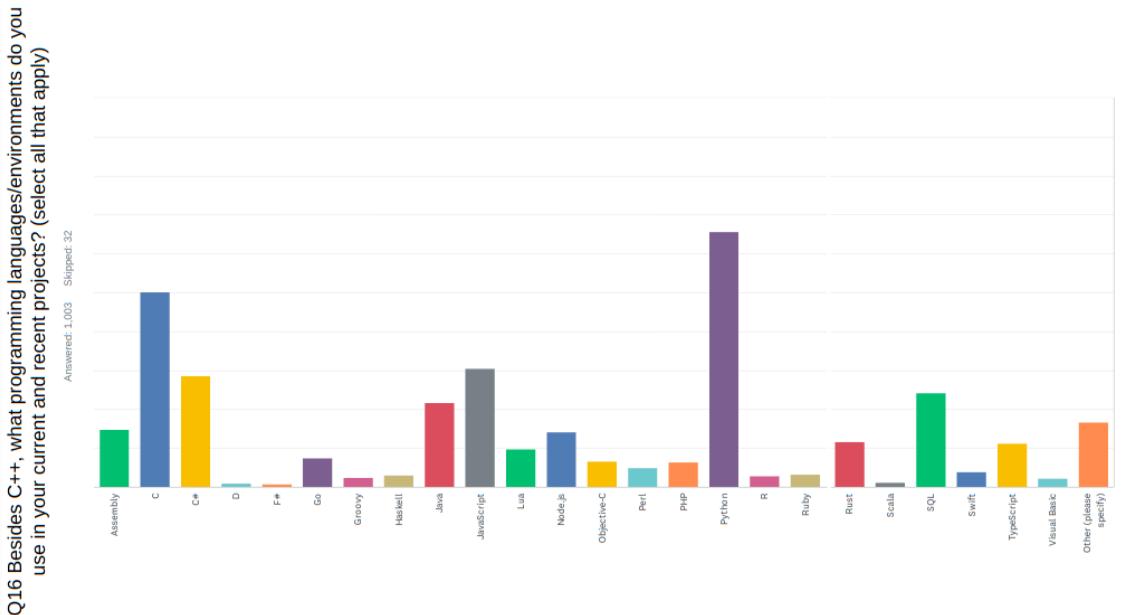


Some none C++ related Questions

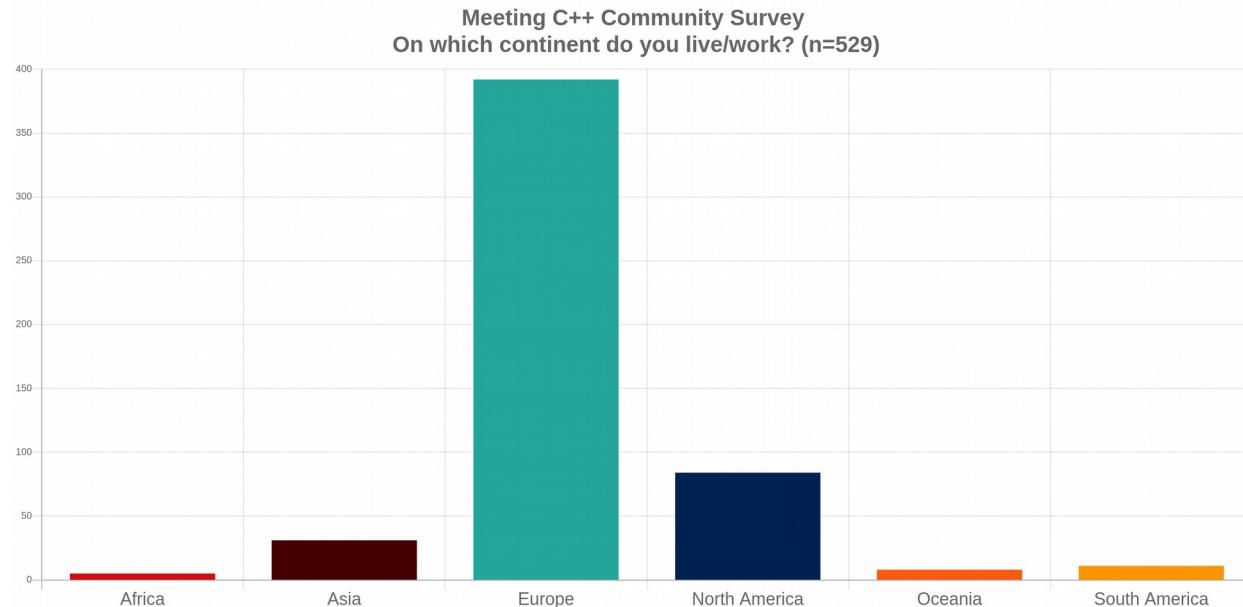
Other programming languages...



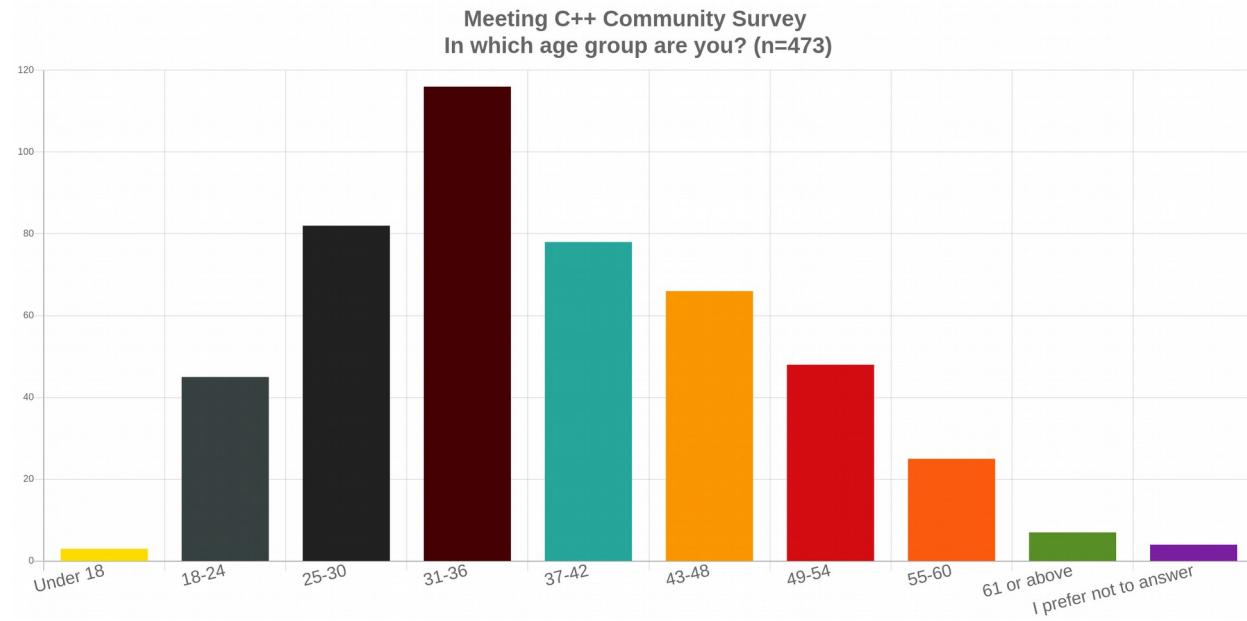
Other programming languages



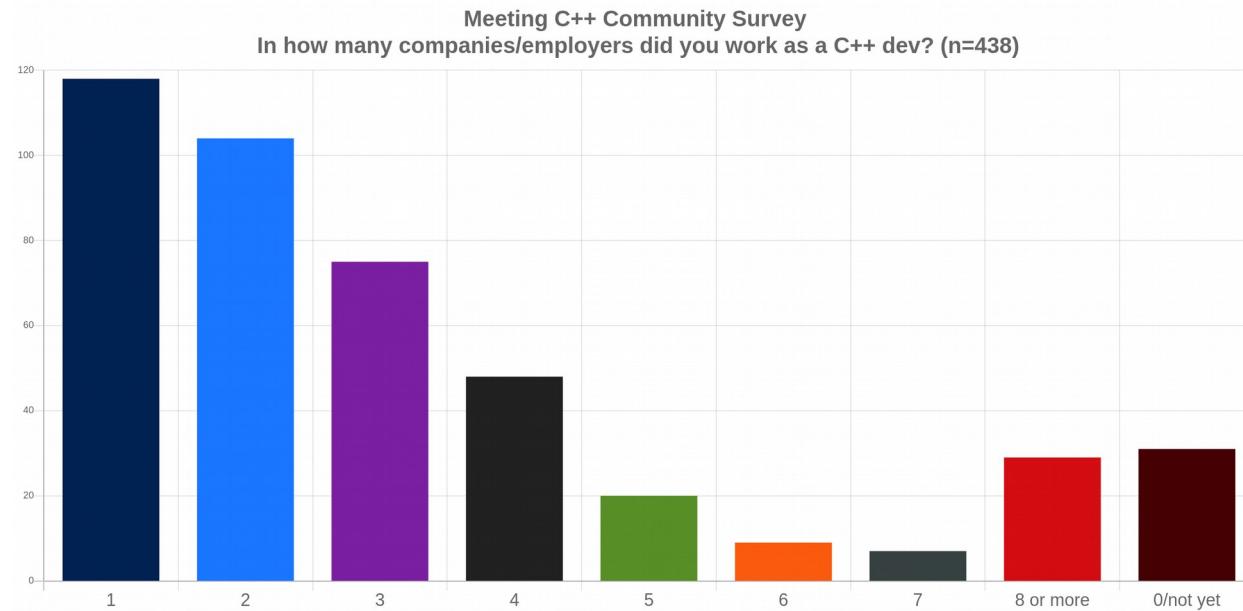
Yes, mostly Europe currently



Age Distribution

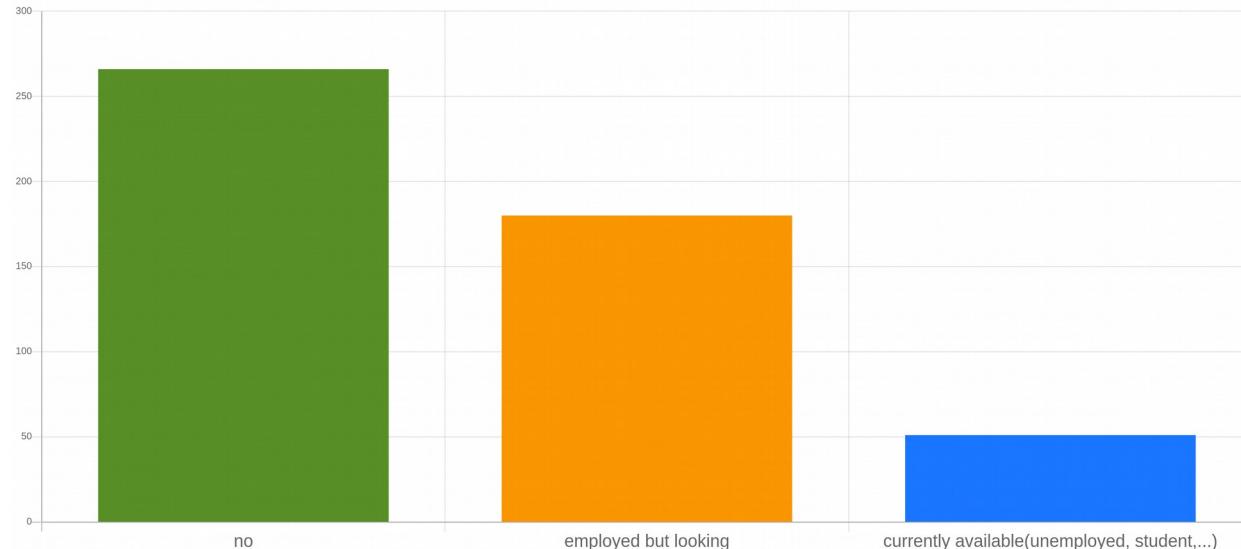


How many companies did you work for?



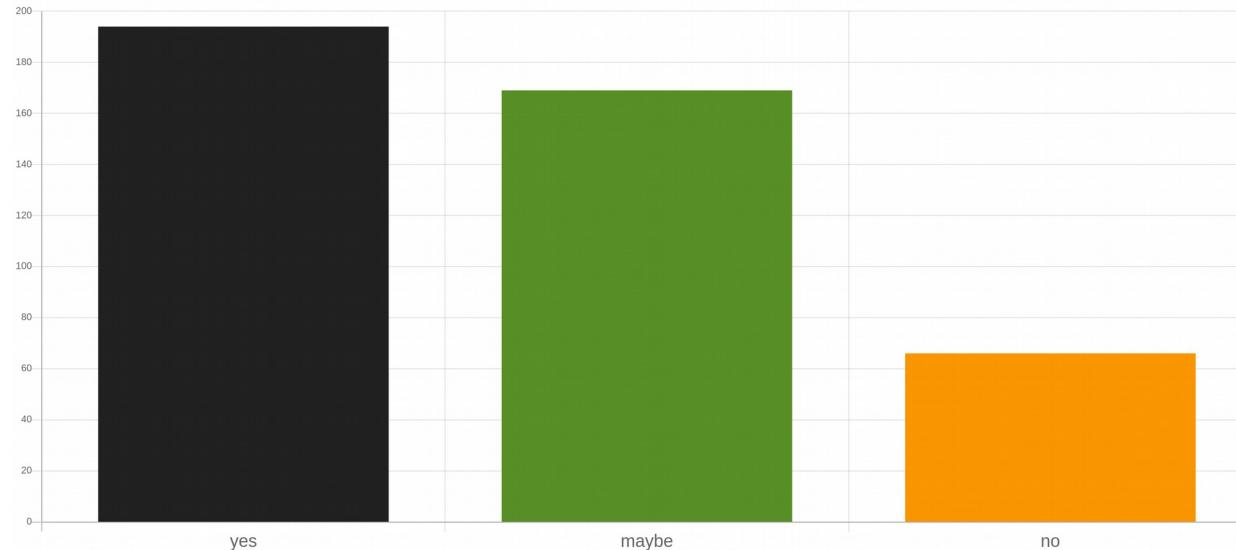
Happy at your job?

Meeting C++ Community Survey
Are you currently looking for a new C++ job? (n=507)

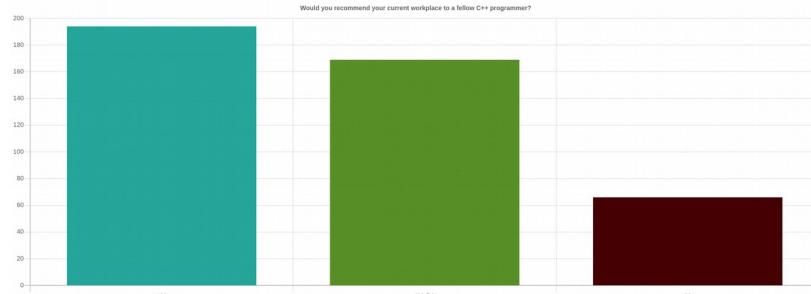


Happy at your job?

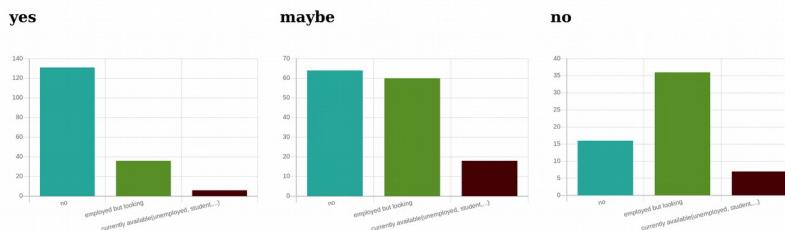
Meeting C++ Community Survey
Would you recommend your current workplace to a fellow C++ programmer? (n=442)



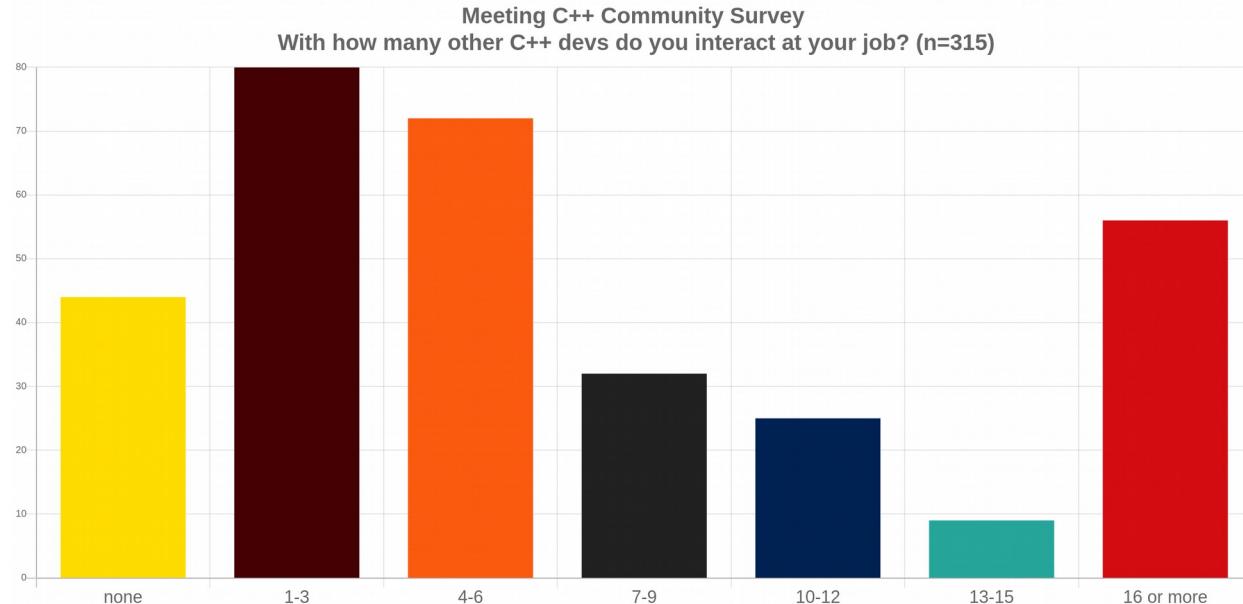
Lets combine the last two...



Would you recommend your current workplace to a fellow C++ programmer? -> Are you currently looking for a new C++ job?



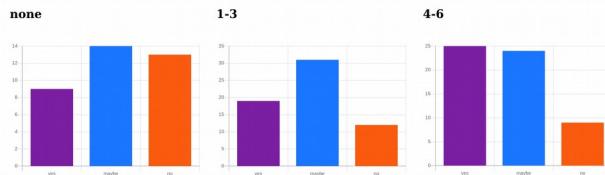
How many coworkers?



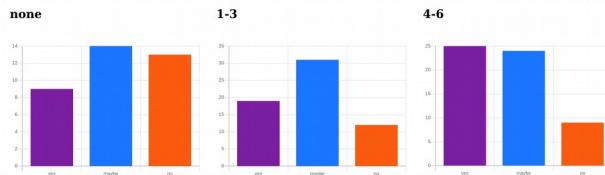
... combined

With how many other C++ devs do you interact at your job? -> Would you recommend your current workplace to a fellow C++ programmer?

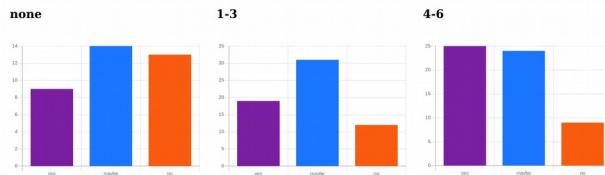
none



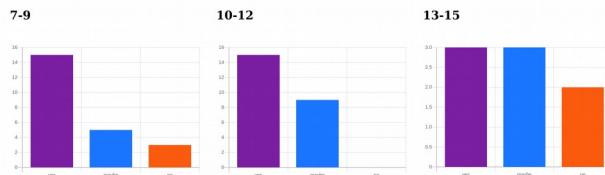
1-3



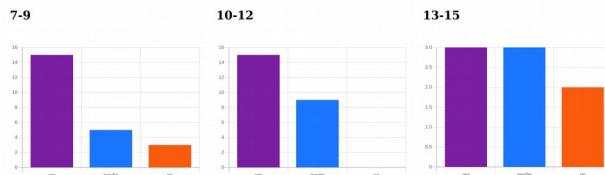
4-6



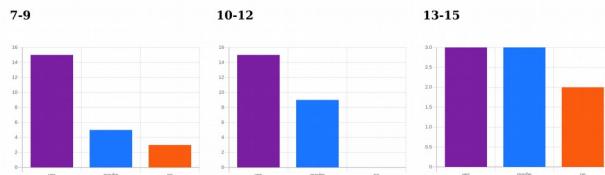
7-9



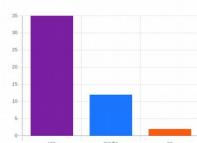
10-12



13-15

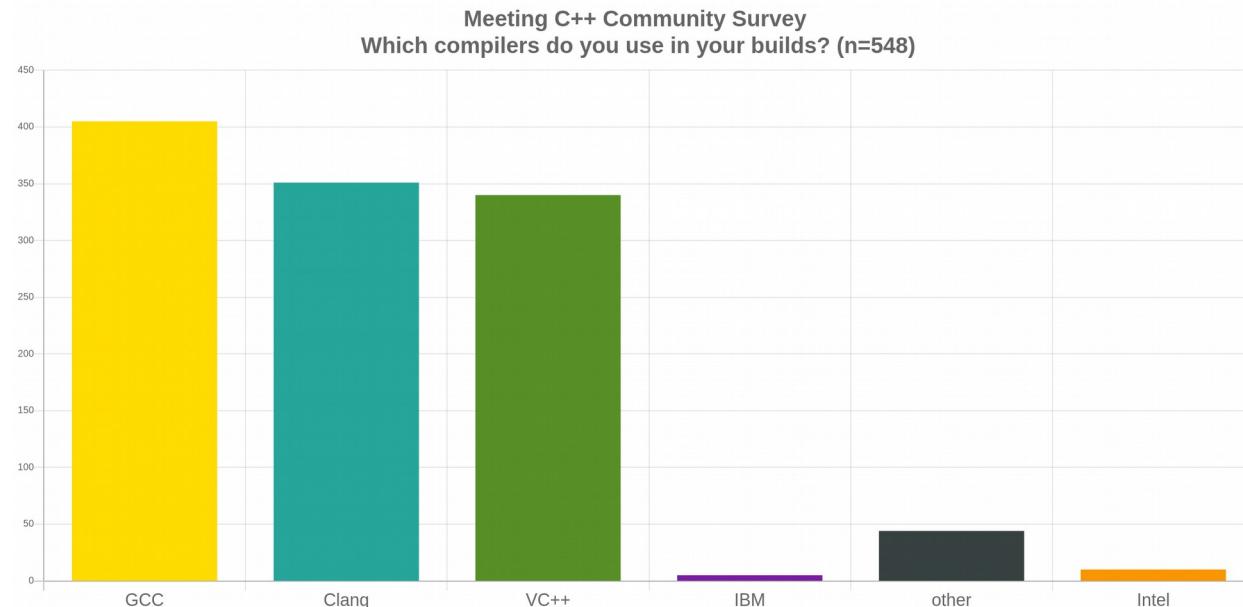


16 or more

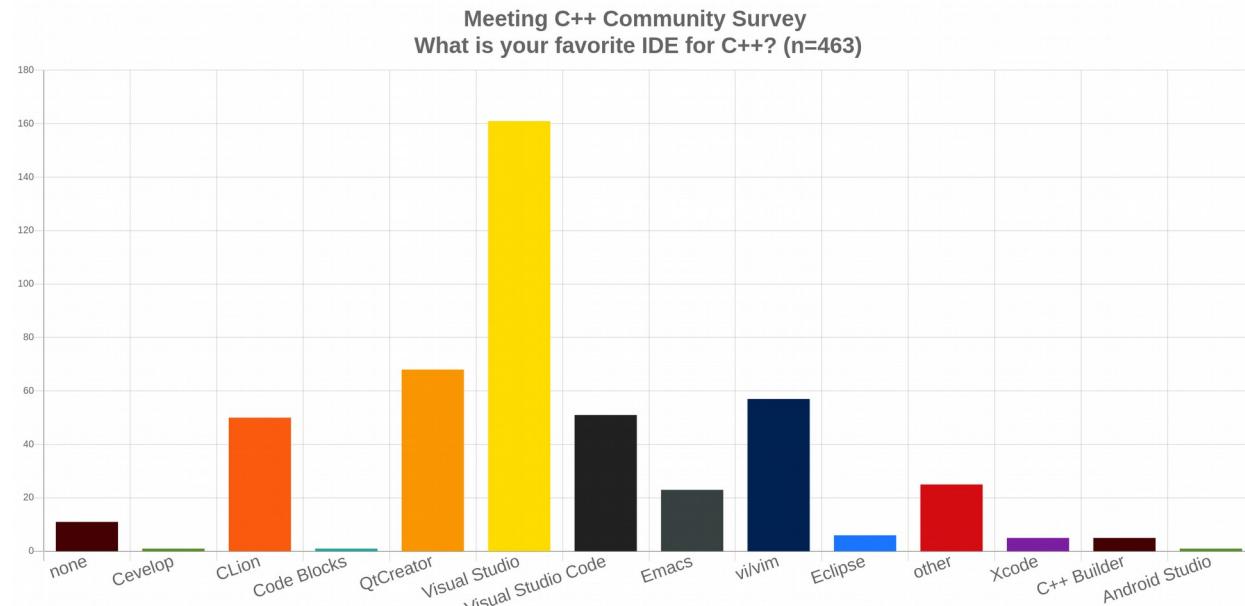


Tools & Frameworks

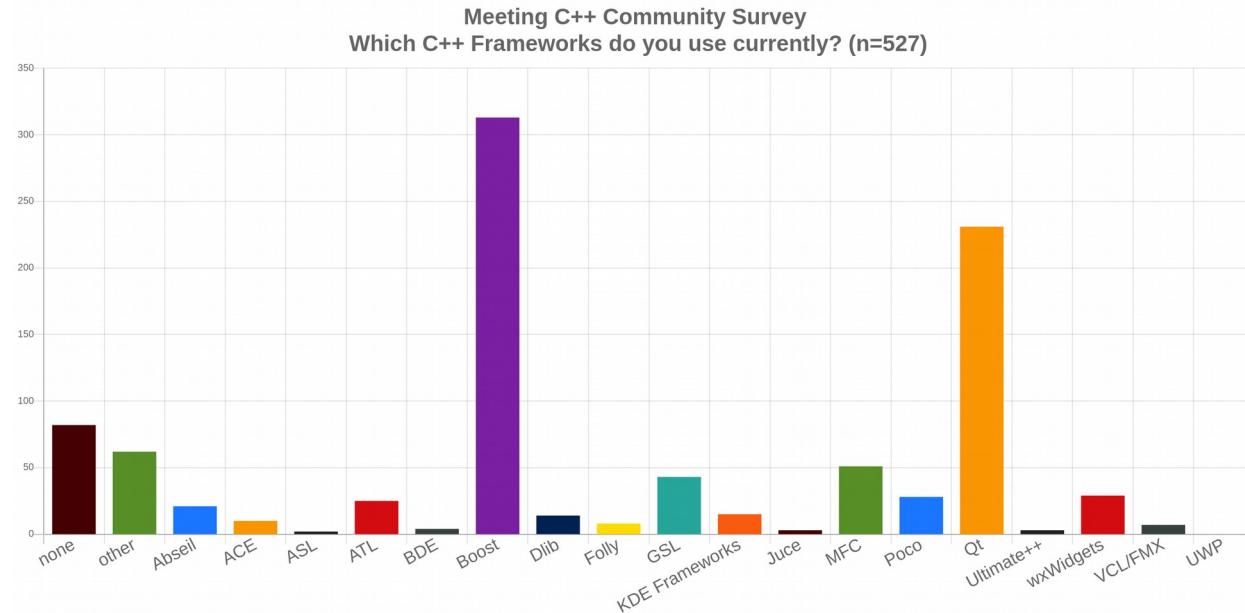
Which compilers do you use?



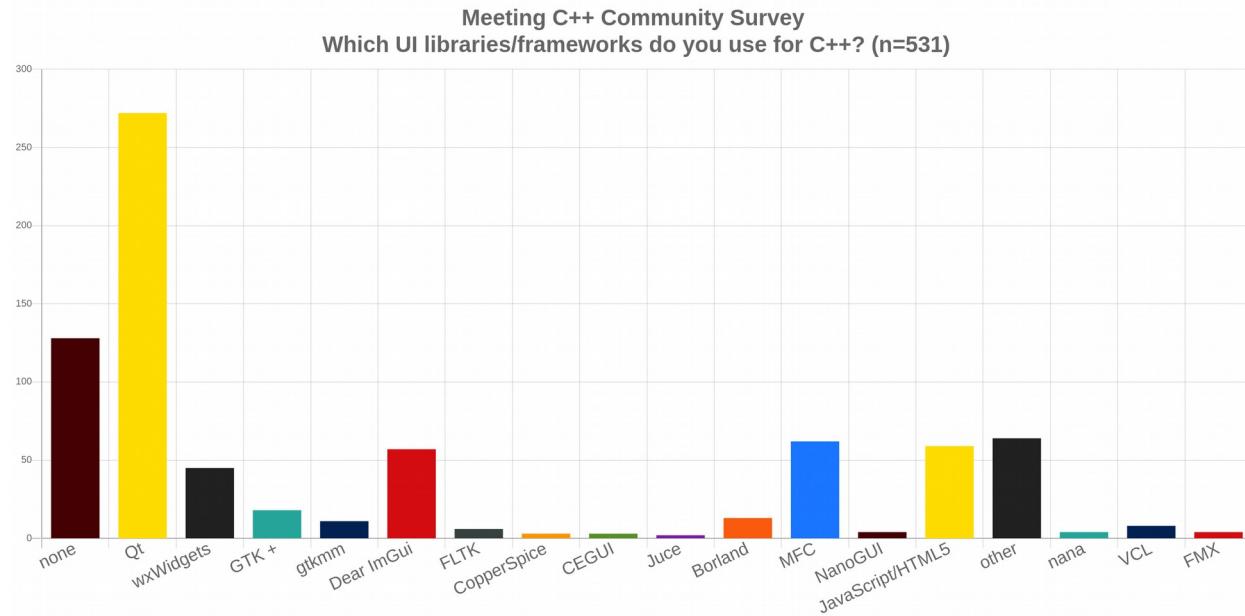
Which IDEs do you use?



Which Frameworks do you use?

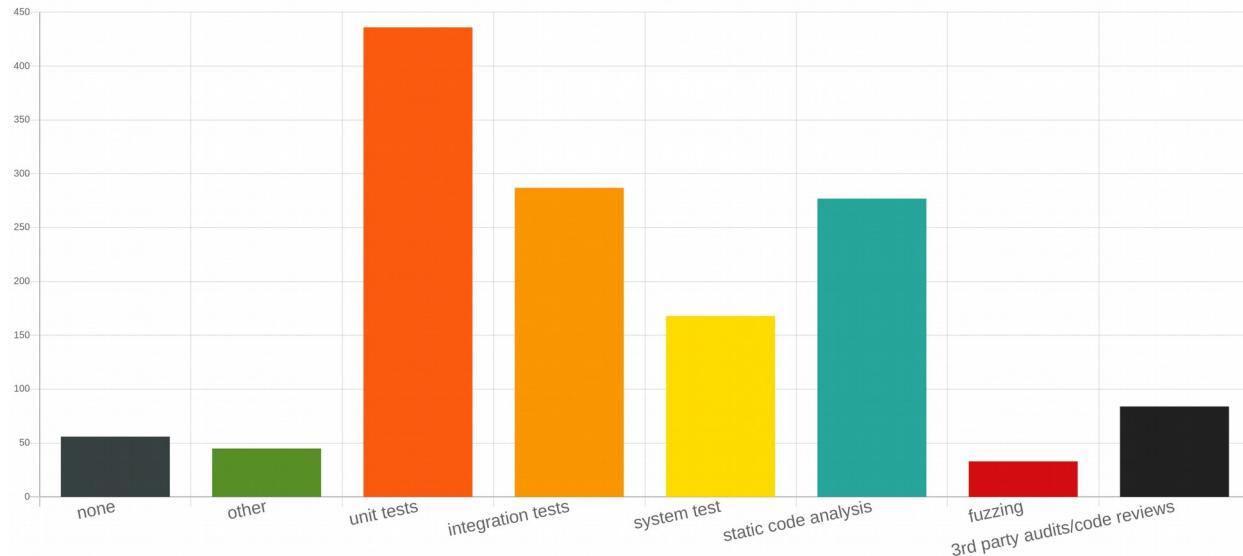


Which UI Framework?

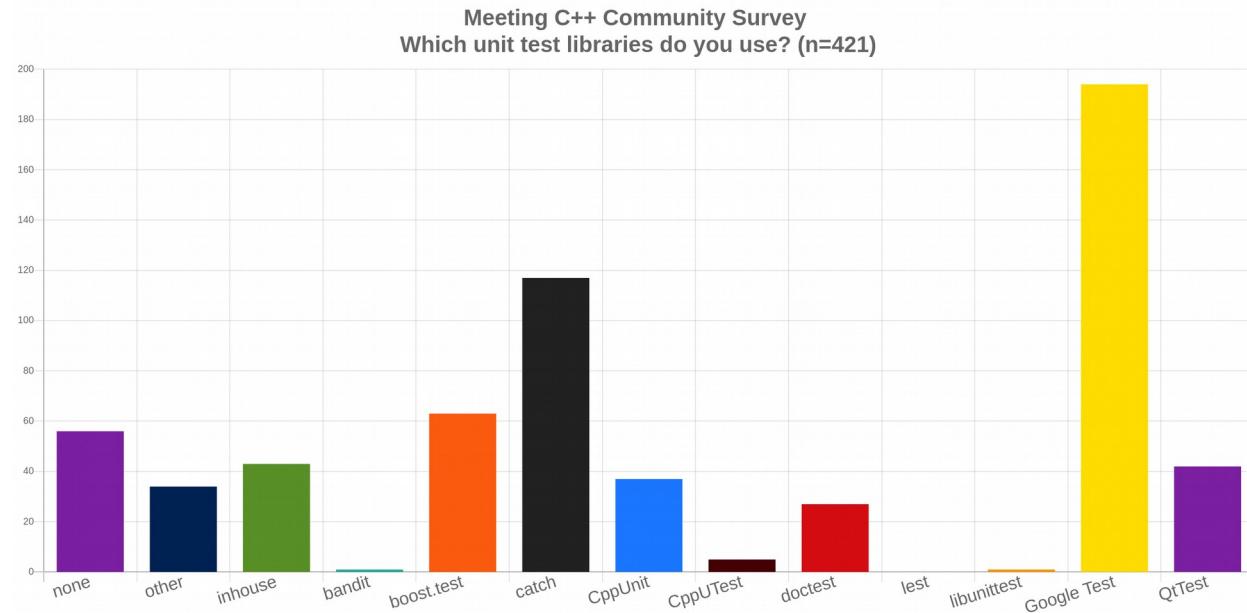


On Testing

Meeting C++ Community Survey
What kind of tests are used in your code base? (n=525)



Unit testing libraries in use



Questions?

- Ask now
- Reach me
 - @meetingcpp
 - info@meetingcpp.com

Thanks for coming!

