Automation & Systematization

Preserving knowledge within KDE

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KDE contributor lifecycle

1

Student, young hacker

Lots of time

2

Young single professional, hobbyist

Some time

3

Mature professional with a family

Almost no time

4

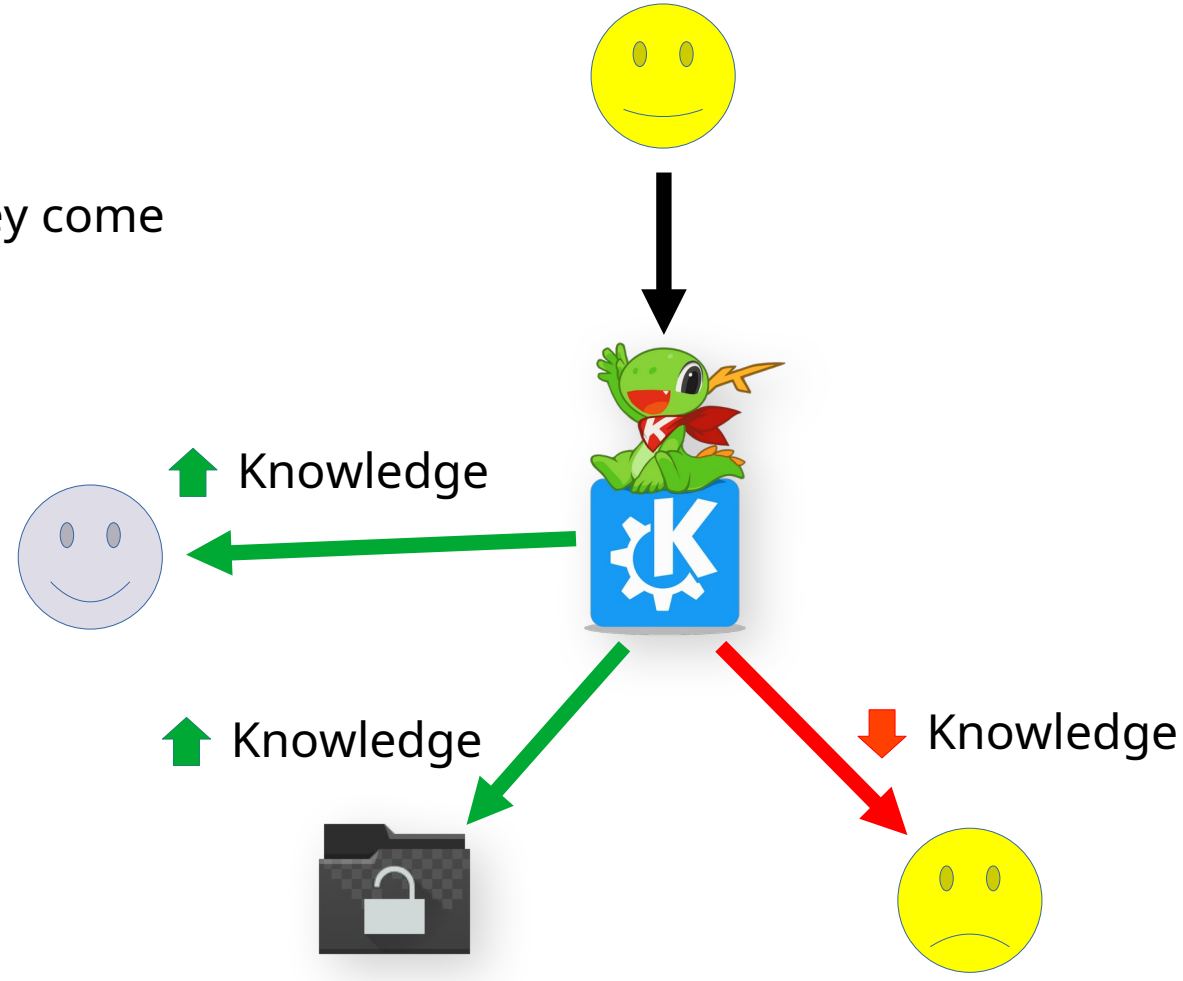
Retiree, financially independent

Lots of time

- People move between groups
- People come and go

Turnover

- People bring knowledge when they come
- Build knowledge within KDE
- Some taught to others
- Some embedded in processes
- Some lost when they go



Preserve that knowledge in KDE!

Lost knowledge

- Processes done by hand
- Personal tools
- Public tools not documented or not run automatically
- Knowledge gained alone and not shared
- Documentation not kept up-to-date

https://www.deviantart.com/mo0onwalker/art/Lonely-Worker-243734716

Working alone, not sharing, not communicating!

“If I stop doing this, it won’t get done”

← And then everything will collapse and look like this!

Working alone sucks

- Duplication of effort
- Re-fixing the same bugs
- Style nitpicks in merge request reviews
- Déjà vu with user support and bug triaging
- No one to take over when you go on vacation

Externalize your knowledge

- Script stuff
- Run scripts automatically
- Consolidate similar tooling
- Test cases
- *Good* code comments
- Formatting autotests/CI/etc.
- Have bots triage bugs
- Keep documentation up to date by using it

Things done so far

- More autotests
- Selenium GUI testing
- Kdesrc-build dependency regeneration script
- Tooling for uploading apps to the Microsoft store
- Mandatory for tests to pass in some projects
- Bugzilla bot
- Updating lots of outdated documentation
- CI jobs to build Flatpak bundles for many apps
- CI jobs to enforce C++ code formatting in some projects
- CI job to validate JSON files in all projects
- Hookscript to prevent you from changing translated text from git

How you can help

- Write more Selenium UI tests
- Make test passing mandatory for ALL projects
- Add CI jobs to build Flatpak bundles for ALL apps
- Add CI jobs to enforce code formatting for ALL projects and common languages
- Run kdesrc-build dep regeneration script automatically
- Make the Bugzilla bot get smarter and do more

Be lazier!

(future you will thank you)

Moonshot ideas

- Consolidate release tooling and run it automatically on scheduled release days
- Use AI to triage bug reports
- Make kdesrc-build automatically install needed 3rd-party dependencies
- Answer common help questions with a chatbot
- Programmatic icon design pipeline
- Auto-generate AppStream release notes from commit message/gitlab tags
- Nate moves “This week in KDE” onto KDE infrastructure 👀

Interested? Let’s talk!

Get involved

- https://kde.org/goals
- https://invent.kde.org/teams/automation
- BoF session on Tuesday, 12:00, room 2

  (https://community.kde.org/Akademy/2023/Tuesday)
- Sprint planned for sometime next year!