

Working with large rust codebases: Takeaways

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Opinions are my own, and do not necessarily represent those of my employer in any way.

- define goals

the obvious

- define goals
- define non-goals

the obvious

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- write documentation

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- define goals
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- write documentation
- track issues

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- write tests

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- track issues
- write tests
- automate

- easy to follow

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- accessible

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- templated PRs

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- accessible
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- checklists

- autocompletion

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- hardware

config file ∞ cli flags

config file ∞ cli flags ∞ environment files

error handling

```
enum ThisError { .. }
```

vs.

```
anyhow::bail!("doom!")
```

avoid glob imports

prefer many smaller crates

avoid linkage

optimize linker flags

cargo build -> cargo check

use test modules as separate files

Document macros extensively

Invest 5x more time in proc macro error generation than you think is needed

async? Y/N

async? Y/N **depends**

blogpost: A look back at asynchronous Rust


```
fn foo(f: Box<dyn Trait>) {}
```

vs.

```
fn foo::<F: Trait>(f: F)
```

Y/N

```
fn foo(f: Box<dyn Trait>) {}
```

vs.

```
fn foo::<F: Trait>(f: F)
```

Y/N depends

Design for test-ability & mock-ability

```
trait CommandCreator { .. }
```

- be generous with additional types

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- avoid String shortcuts

example - sccache/cachepot

```
struct CommonNameRecord(String);  
type CommonNameRecord = String;
```

zer0 magic numbers

jaeger

jaeger | influxdb

jaeger | influxdb | kapacitor

flamegraphs

flamegraphs | criterion

flamegraphs | criterion | iai

avoid manual labor

avoid manual labor use cargo power

avoid manual labor

Commonly underestimated effort for a *good* ci pipeline

Commonly underestimated effort for a *good* ci
pipeline concourse-ci.org

This list is by far *not* complete