

# Odie and Sherpa

Building Extensions from Scratch

# What is Odie?

- A build environment for Tcl/Tk and its extensions
- Focused on building tools from source
- Tailored to wrap compiled extensions for the Teapot

# What is Sherpa

- A command line utility which uses recipes to build extensions
- Built by the Odie bootstrapping process
- A self-contained executable that can run outside of Odie

# Live Demo

(Ignore the man behind the curtain)

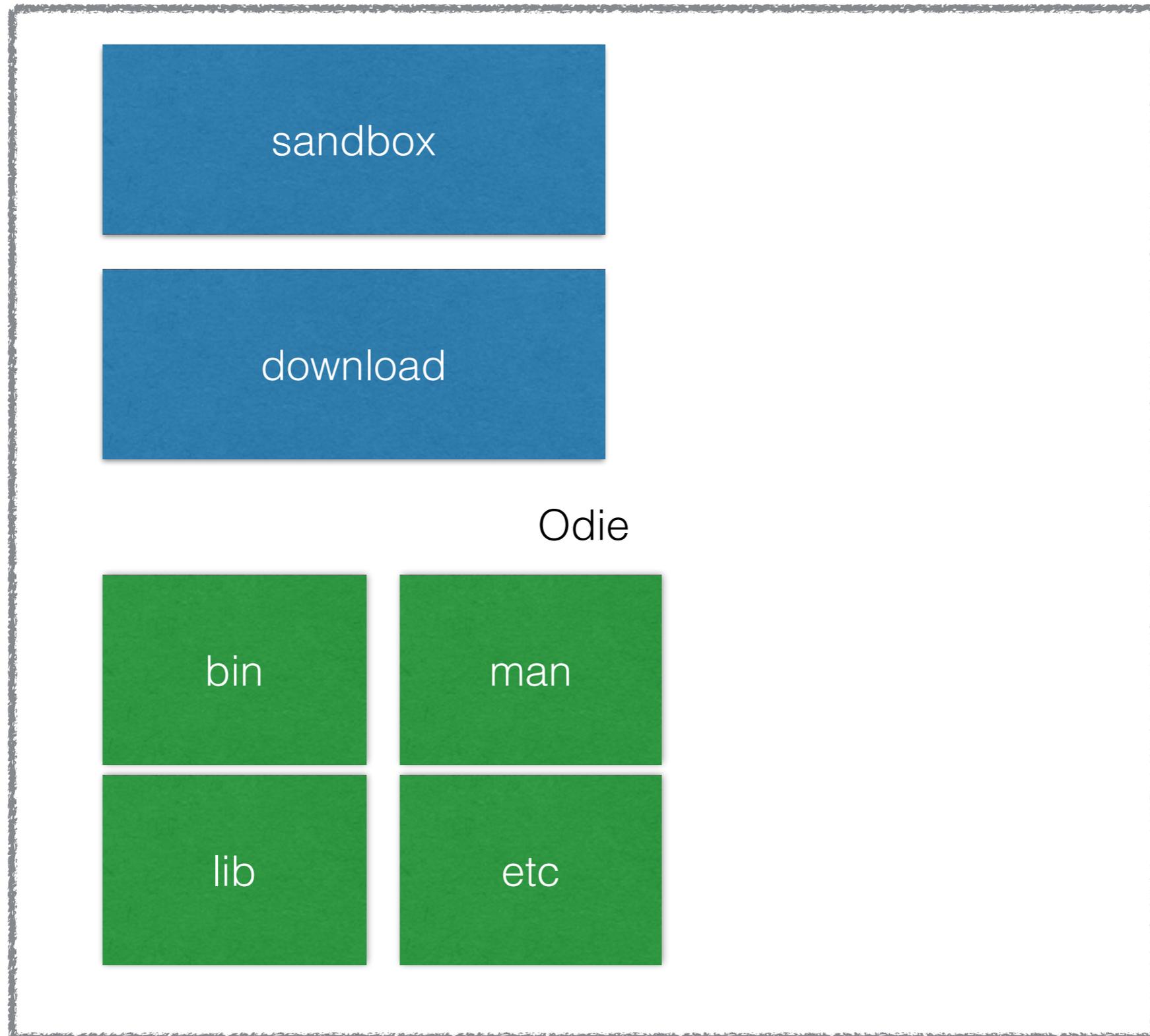
## Installing (Unix)

```
mkdir -p ~/odie-demo/sandbox/odie
cd ~/odie-demo/sandbox/odie
fossil open ~/odie/download/odie.fos
./configure \
    -prefix=$HOME/odie-demo \
    -download=$HOME/odie/download
    -enable-cocoa=no
make install
```

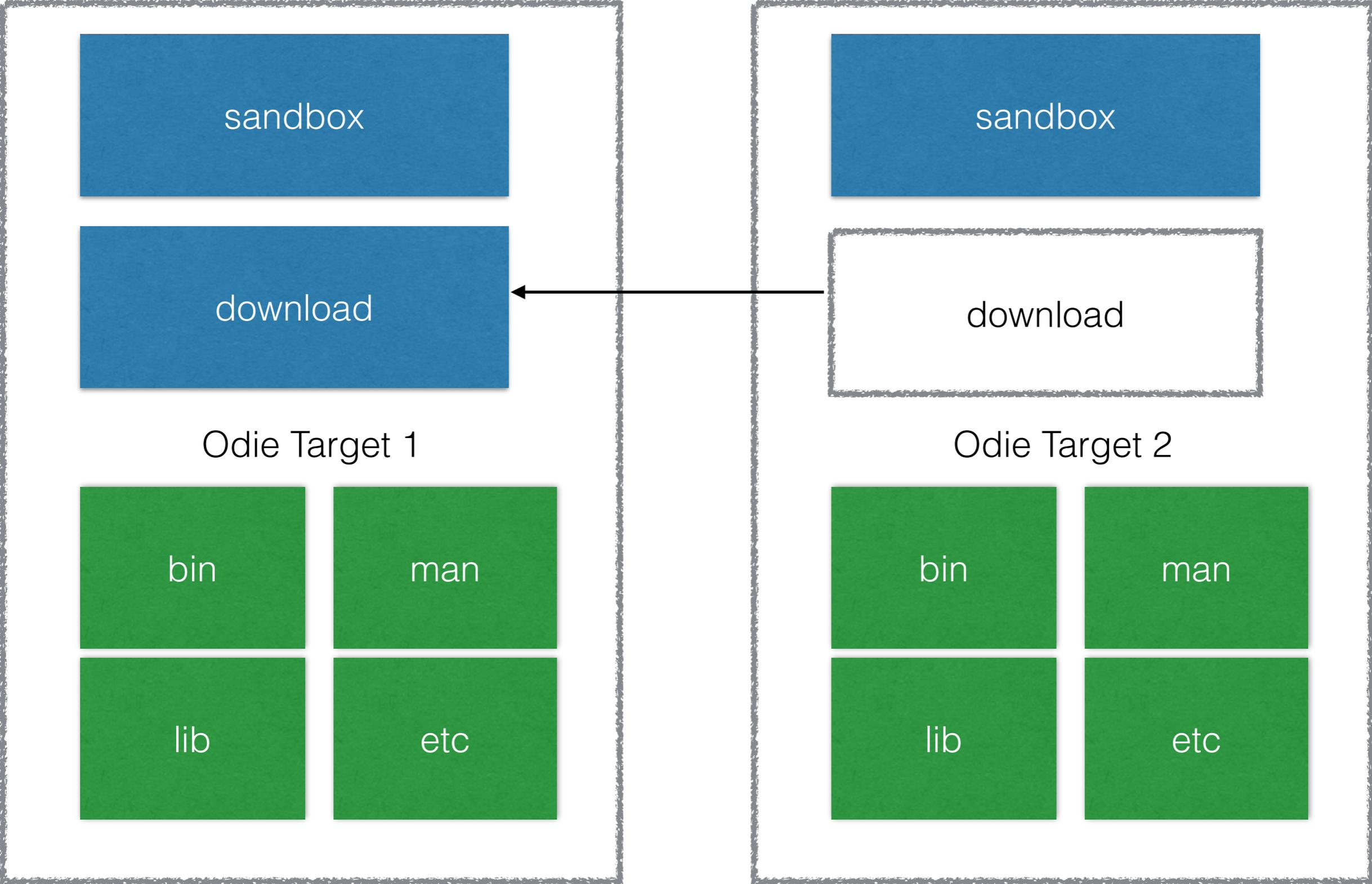
# Installing (Windows) Inside MSYS/MinGW

```
mkdir -p c:/odie-demo/sandbox/odie
cd c:/odie-demo/sandbox/odie
fossil open c:/odie/download/odie.fos
./configure \
    -prefix=c:/odie-demo
make install
```

# Odie File Structure



# Odie File Structure



Fossil

Tcllib  
Canvas3d  
Tklib  
Taolib

Git

VecTcl  
Steve Haskala's Stuff  
Critcl

Tarball

TkTable  
TkImg  
Sqlite

Zip

Twapi

sherpa

Fossil

Git

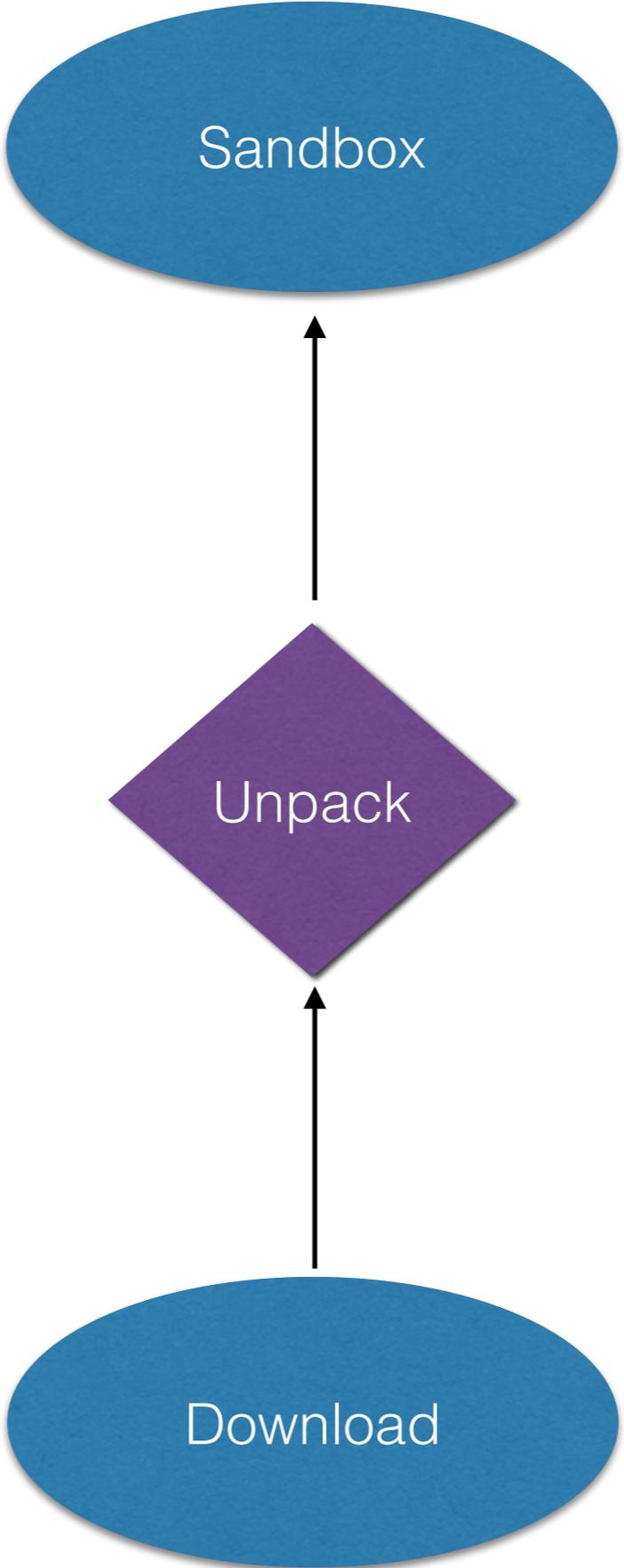
Tarball

Zip

Download

Download

sherpa



sherpa

Sandbox

Compile



sherpa

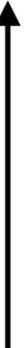
Sandbox

Install

Temp Location

Local Teapot

Build Teapot



sherpa

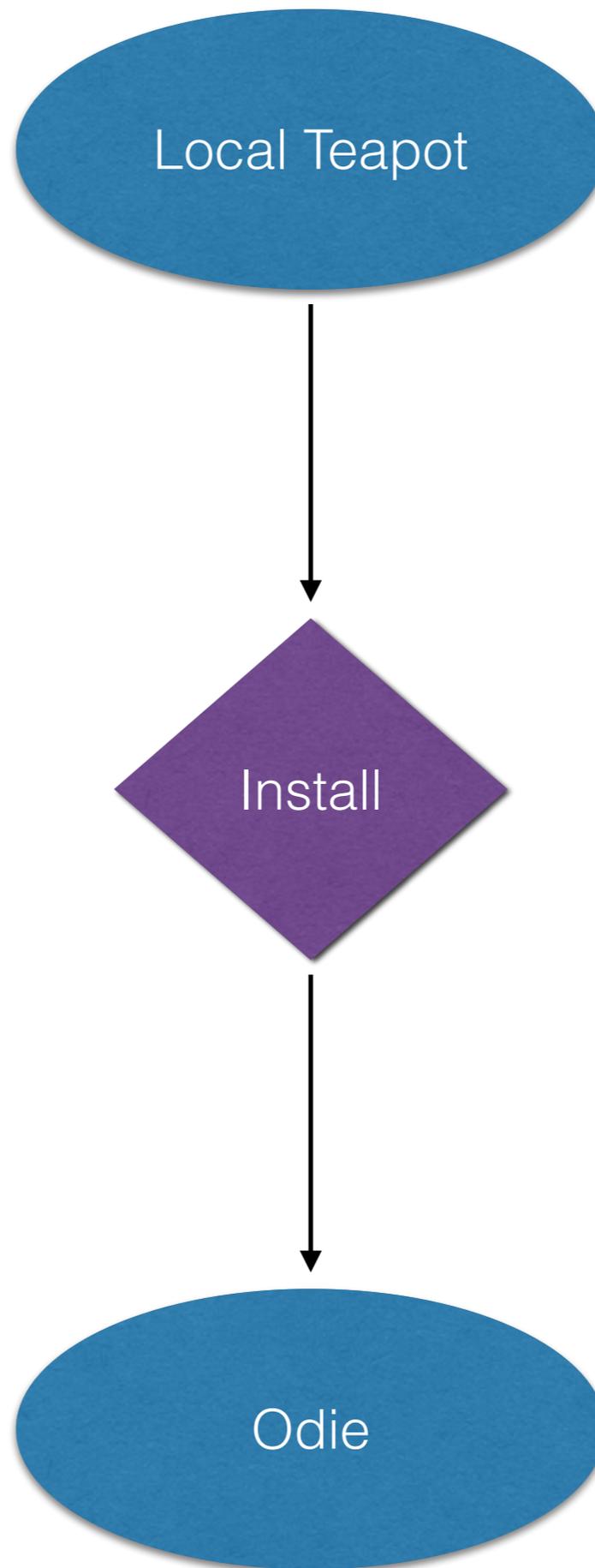
Teapot Service

Download

Local Teapot



sherpa



Local  
Teapot

tclsh

wish

tcllib

critcl

Odie

basekit

sherpa

TclApp

# It makes tons of Julianne Fries!!

Local  
Teapot

Pkgs

tclsh

wish

tcllib

critcl

Odie

basekit

sherpa

TclApp

Package  
Manifest

VFS

How does it work?

(Very well, thank you  
very much...)

# Odie

- Distributed via Fossil
- Autoconf
- Shell Scripts to Bootstrap Tcl
- Tcl scripts to build the rest

# Sherpa

- ZipVFS Self-Contained Application
- Uses bits of Tcllib
- Recipes are written in a Domain Specific Language (DSL)
- The DSL is written in Tao

# Sample Recipe

```
::sherpa::recipe tclconfig {  
  fossil_url http://core.tcl.tk/tclconfig  
} {  
  superclass \  
    sherpa.distribution.fossil sherpa.module  
}
```

# Sample Recipe

```
sherpa::recipe tdom {  
  package_binary 1  
  package_binary_tk 0  
  git_branch trunk  
  git_url https://github.com/tDOM/tdom  
  package_name tdom  
  package_version 0.8.3  
} sherpa.module.tea_git
```

# Recipes

- Distributed in the Odie fossil repository
- Packages with no recipe are retrieved from upstream teapots
- Local config files can add new recipes or modify existing recipes

# Future Direction

- Create a web-editable recipe repository
- Devise a mechanism for distributions to populate their own customizations