From the desktop to the cloud

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What do we need to make, build and deploy an app to the cloud?

Orchestration

- Do everything in a consistent way

Dependencies and Build

- Provide everything our app needs and create binaries

Tests and Linting

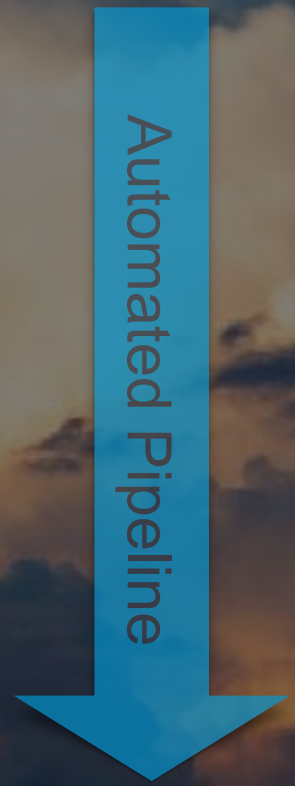
- Ensure quality of application

Package

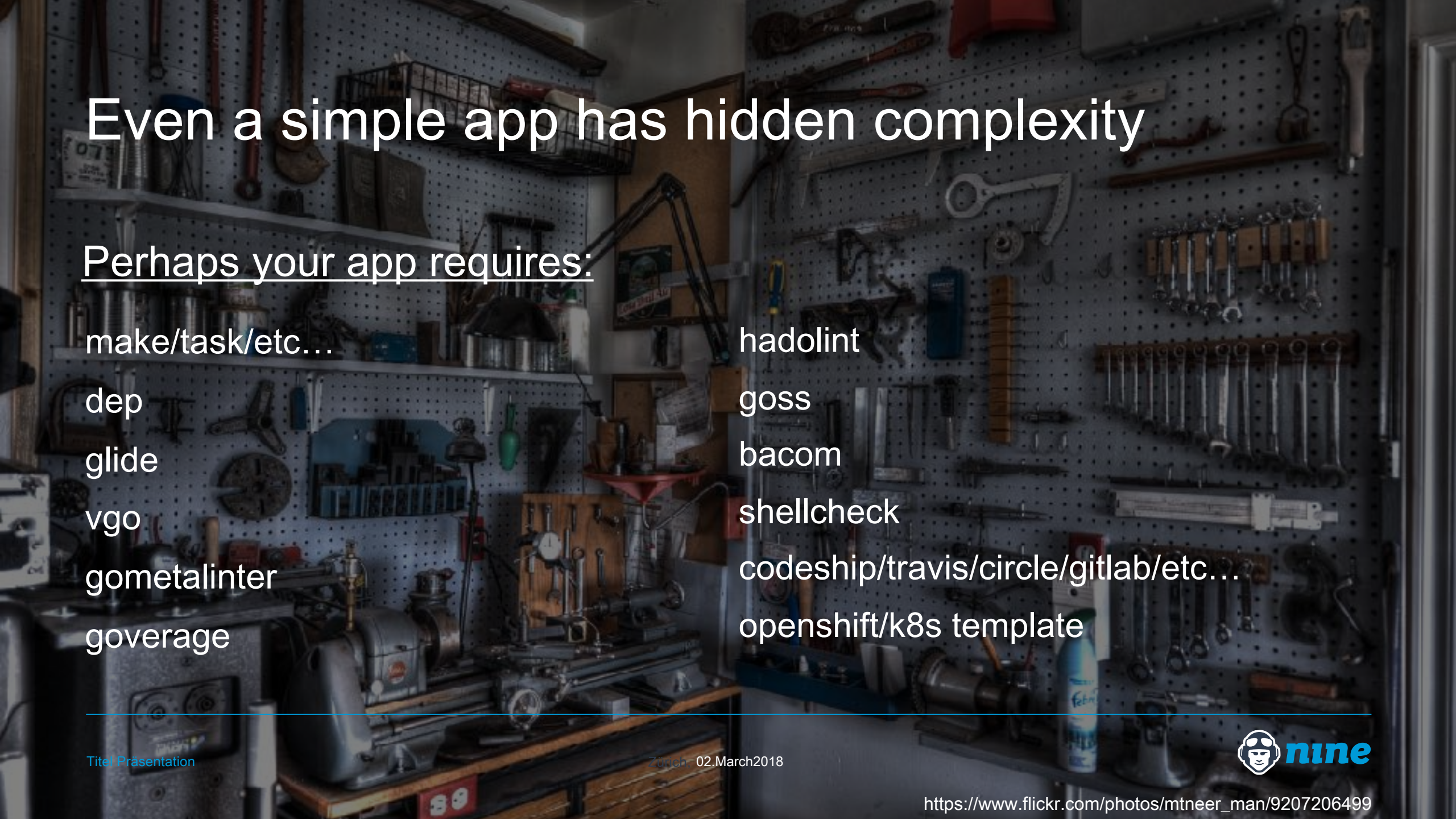
- Put our application into something we can deploy

Deployment

- Deliver our application to the cloud of our choosing



Even a simple app has hidden complexity



Perhaps your app requires:

make/task/etc…

dep

glide

vgo

gometalinter

goverage

hadolint

goss

bacom

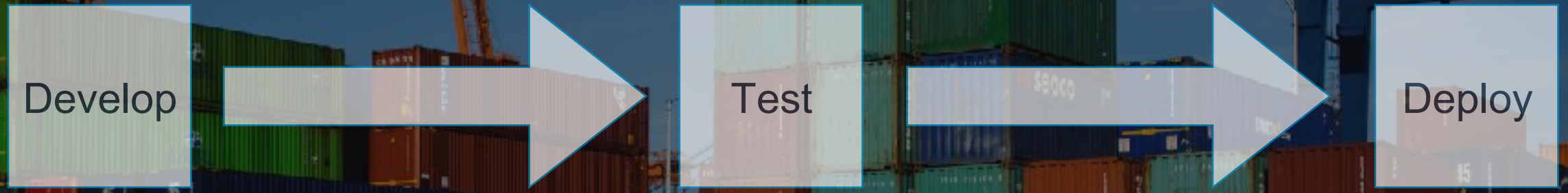
shellcheck

codeship/travis/circle/gitlab/etc…

openshift/k8s template

https://www.flickr.com/photos/mtneer_man/9207206499

How do we manage this complexity across environment boundaries?



- Containerising the application provides a stable and reproducible environment
- Containerisation is the ‘native’ format of the cloud
- Reduces complexity around scaling
- However introduces increased complexity around tooling

Lets explore this with an example application…

https://github.com/twhiston/gophers10

https://www.flickr.com/photos/toomore/23066277453

Application/Pipeline Dependencies

Golang toolchain (https://golang.org/dl/)

Task (https://github.com/go-task/task)

GoMetaLinter (https://github.com/alecthomas/gometalinter)

Dep (https://github.com/golang/dep)

Packr (https://github.com/gobuffalo/packr)

Docker (https://www.docker.com)

Goss (https://github.com/aelsabbahy/goss)

Codeship Ci (https://app.codeship.com/twhiston)

Openshift (https://openshift.nine.ch:8443/console/)

Our simple one page app has 9 explicit dependencies once we have satisfied all our concerns!

Conclusion

- It doesn’t matter about the size of the application, the tooling will always be similar
- Almost our entire toolchain can be in golang
- Complexity is manageable by standardisation
- Complexity across environments requires infrastructure as code approach
- Continuous deployment is the easy part


nine
cloud navigators
Thank You!
https://coclouds.com/538/sunsets/2013-06-10-2/