

Communication between Tribes

A story of silos, Devops and Government

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Puppet





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puppet

**The shortest path
to better software.**

Backstory

The very abridged version

GOV.UK 100 days

GDS

Government Digital Service



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I'm no longer a civil servant.
Thank you to everyone who is.

I learned the importance of
communication first hand;
from successes, failures
and relentless observation

- **Stories from Government**
- **The importance of language**
- **The power of stereotypes**
- **A few** **Tips**

Different Languages

One for each silo

Appreciating you're a silo



Agile, lean, scrum, containers,
iteration, stack, hypervisor, nosql,
serverless, cloud, velocity...

Agile, lean, scrum, iteration, cloud, nosql, serverless, velocity...

Developer silo

Incident, event, problem, COBIT,
configuration management,
capacity management, CAB...

Incident, event, problem, OBIT,
configuration management,
capacity management, CAB...

IT silo

APT, threat model, risk, cyber,
mitigation, control, kill chain,
threat intelligence, opsec

APT, assume breach, threat
model, detection, control

Security silo

SPAD, MCO, GPG, CESG,
CERT, GDS, IDP, DTO, 18F,
USDS, IL3, OCTO, EUD

Government silo

lingo

noun

plural noun: lingo

the language and speech,
especially the jargon, slang or
argot, of a particular field, group
or individual

Language acts as a barrier to entry to different communities

Language differences reinforce organisational silos

Tip

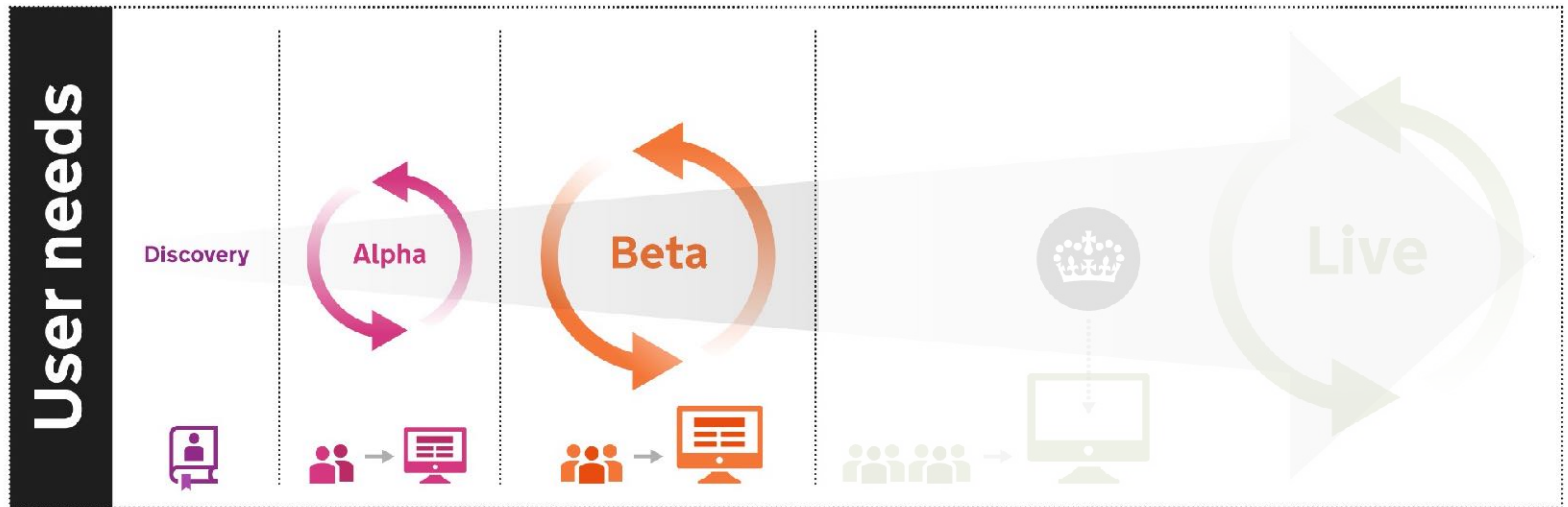
Identify words in your organisation that are only in use in certain groups or teams

The New Service Management

Talking ITIL and agile

At GDS we talked a lot about Design, User Research, Agile and Open Source because they were fairly new to Government

We talked a lot about discovery and alpha because people started there



We hired a lot of software
developers because
Government had very few

We didn't talk enough about operations

We didn't talk enough about
operations (to begin with because
we weren't running anything)

Tip

Don't take things for granted,
communicate about **everything**
you care about

Tip

Words often carry the weight of
past experiences and other
organisations

“Will the release really work?”

Paraphrasing one of my colleagues from 2012

“Yes. We’ve done it more than
1000 times. I’m confident it
works now”

Paraphrasing me

Early members of GDS were
mainly from media, startup and
technology backgrounds

The formal language of
Service Management* was
unfamiliar to most

*Ironically, ITIL was a creation of CCTA, a UK Government agency

But practices like automation, developers on-call, configuration management, continuous deployment, and automated testing were second nature

Tip

Transformation often means new types of people. They will bring their own language and assumptions

“ We cancelled one configuration management effort because we couldn't keep the spreadsheet up to date ”

Remembering one conversation with an Government department

“The recommendation was to move from quarterly releases to one release every 6 months”

Remembering one conversation with an Government department

“ Oh, we use an open source configuration management tool which reports state every 30 minutes for every device ”

Remembering one conversation with an Government department

Tip

Overlapping words from different tribes are often a great place to start collaborating

Stereotypes

Understanding what people think of you

A lack of personal relationships,
sometimes caused by the inability
to communicate, leads to
stereotypes

stereotype

noun

plural noun: stereotypes

a widely held but fixed and
oversimplified image or idea of a
particular type of person or thing.

What grade
are you?

Shiny new
technology!

No

We need
bimodal IT

What grade
are you?

Developer

Shiny new
technology!

No

We need
bimodal IT

Government

What grade
are you?

Shiny new
technology!

No

We need
bimodal IT

What grade
are you?

Shiny new
technology!

No

We need
bimodal IT

IT

What grade
are you?

Shiny new
technology!

No

Security

We need
bimodal IT

Some silos are organisational

Many silos are personal

BOFH

Bastard Operator from Hell

a fictional rogue systems administrator who takes out his anger on users and others who pester him with computer problems

Tip

Subverting stereotypes as a way
to build relationships

Security Says No?

Experts, intermediaries and end users



Rob Reynolds
@pressedontech



 **Follow**

@randybias @simoncrosby in my experience
infosec teams say "no" and not why or
suggesting alternatives. Not helping. Just
slowing change

RETWEET

1

LIKE

1



12:35 PM - 2 Jun 2016





Scaling finite expertise is often
done with stacks of paper policy

Making use of stacks of paper
policy often involves middlemen

Having direct access to real domain experts* is awesome

*Unfairly in my case that mean



“ I think you’ll find you can’t do that because of my interpretation of this wording in GPG13 ”

Unfairly paraphrasing countless conversations with intermediaries

“
Let’s just ring Richard from
GCHQ and see what he thinks
”

Unfairly paraphrasing countless conversations with intermediaries

“

...!

”

Paraphrasing countless conversations with intermediaries

Tip

Don't let scarcity of expertise lead to unapproachable stereotypes

Code as a Communication Medium

Bridging policy and practice

The dreaded incident severity conversation

Critical, Major, Minor, P1, Sev2

Stage 1
Everyone thinks
everything is critical

Stage 2

Everyone thinks all incidents for their own service are critical

GOV.UK Smoke Tests

And I force a varnish cache miss

When I search for "tax" using unified search

Then I should see some search results

@normal

Scenario: check organisation filtering on unified search

Given I am testing through the full stack

And I force a varnish cache miss

When I search for "policy" using unified search

Then I should see organisations in the unified organisation filter

@normal

Scenario: check sitemap

Given I am testing through the full stack

And I force a varnish cache miss

When I get the sitemap index

Then It should contain a link to at least one sitemap file

And I should be able to get all the referenced sitemap files

Feature: Search

@high

Scenario: check search resu

Given I am testing throug

And I force a varnish cac

When I search for "tax" u

Then I should see some se

The ambiguous nature of the written word

Lots of opportunities for policy as code

CDN Acceptance Tests

```
// Should cache responses for the period defined in a `Cache-Control:  
// max-age=n` response header.  
func TestCacheCacheControlMaxAge(t *testing.T) {  
    ResetBackends(backendsByPriority)  
  
    const cacheDuration = time.Duration(5 * time.Second)  
    headerValue := fmt.Sprintf("max-age=%.0f", cacheDuration.Seconds())  
  
    handler := func(w http.ResponseWriter) {  
        w.Header().Set("Cache-Control", headerValue)  
    }  
  
    req := NewUniqueEdgeGET(t)  
    testRequestsCachedDuration(t, req, handler, cacheDuration)  
}
```

BDD Security

Scenario: The application should not contain SQL injection vulnerabilities

Meta: @id scan_sql_injection @cwe-89

Given a scanner with all policies disabled

And the SQL-Injection policy is enabled

And the attack strength is set to High

And the alert threshold is set to Low

When the scanner is run

And the XML report is written to the file sql_injection.xml

Then no Medium or higher risk vulnerabilities should be present

Puppet

```
package { 'openssh':  
  ensure => latest  
}
```


Tip

Where possible combine policy
with implementation

Conclusions

If all you remember is...

Share language as much
as possible

Because sharing language makes
shared tooling and process easier

And learning the language of
another tribe is a fantastic way
of breaking down silos

What I Don't Know How to Do

Devops Enterprise Ask

What macro organisational structures limit the emergence of silos?

Thanks

Ask me questions later

