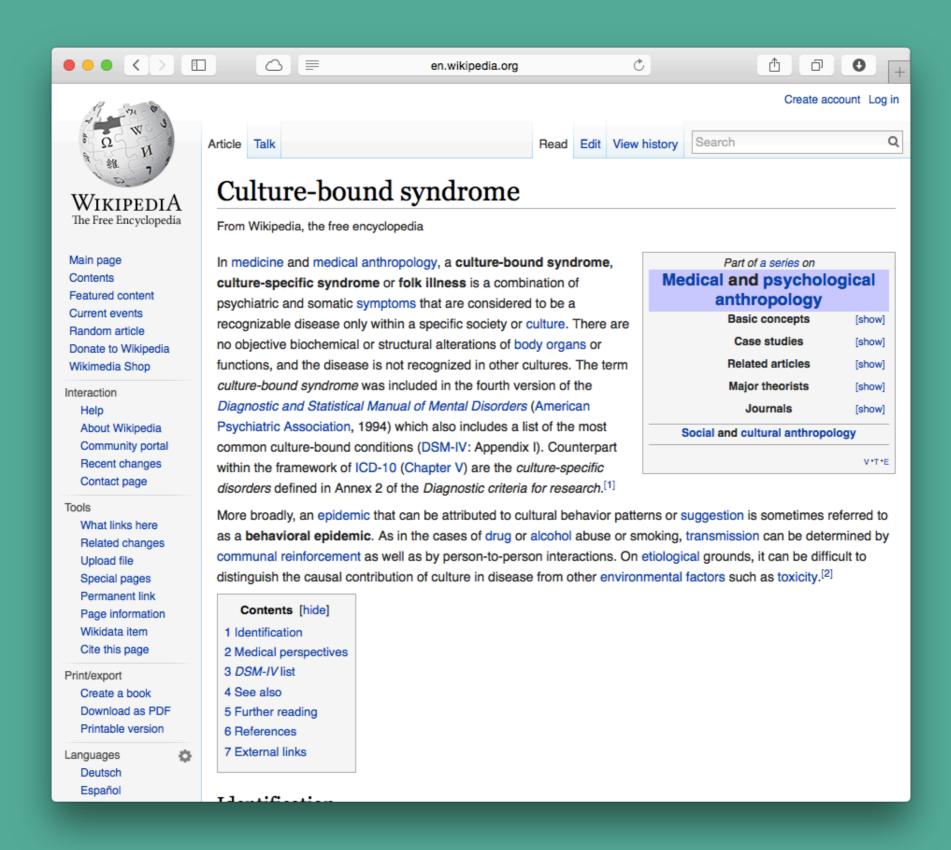
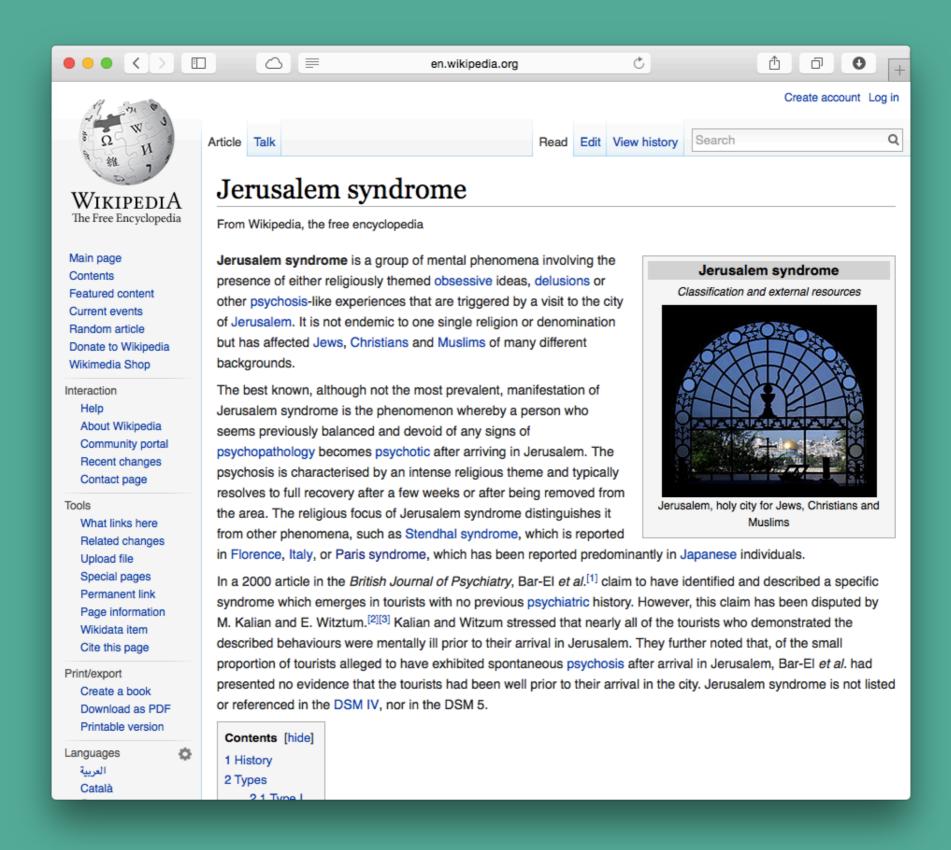
# Culture Shift

# How DevOps changed the way we think about IT







# Culture Shift

How DevOps changed changes the way we think about IT

#### Roadmap

- 1. Why Culture?
- 2. Some Context
- 3. Meet DevOps
- 4. DevOps, meet Academia
- 5. Open Discussion

#### Culture

The outlook, attitudes, values, morals, goals, and customs shared by a group.

#### Culture (more simply)

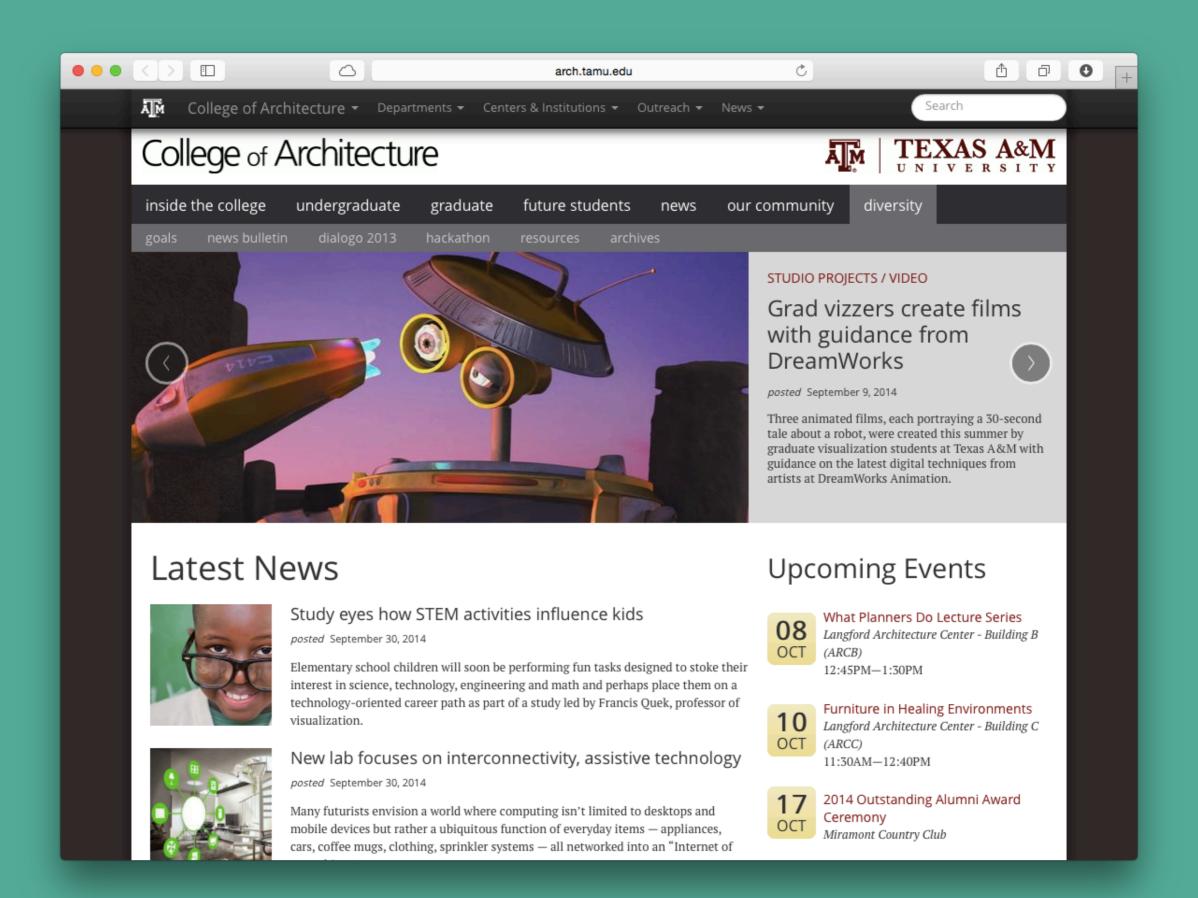
Culture is the way you think, act, and interact

## The Context

# The College of Architecture at Texas A&M

#### College of Architecture

- 4 departments
- 8 research centers and institutes
- -500 employees
- 10,000 (3,000) students
- locations across Texas and the globe



## The Problem

Do we have a problem?

IT has always been like this

## The Solution



#### The Phoenix Project

A management fable in the style of E. Golrdratt's *The Goal*.

Theory of Constraints — Systems management

#### What is DevOps?

DevOps is a service delivery concept that stresses communication, collaboration, and integration between software developers and IT professionals.

DevOps, from Wikipedia

#### What is DevOps (alternative edition):

Developers need to understand infrastructure. Operations people need to understand code. People need to f\*\*king work with each other and not just occupy space next to each other.

John Vincent

**DevOps - the Title Match from blog dot lusis** 

DevOps: Operations:: Agile: Development

#### DevOps seeks to maximize:

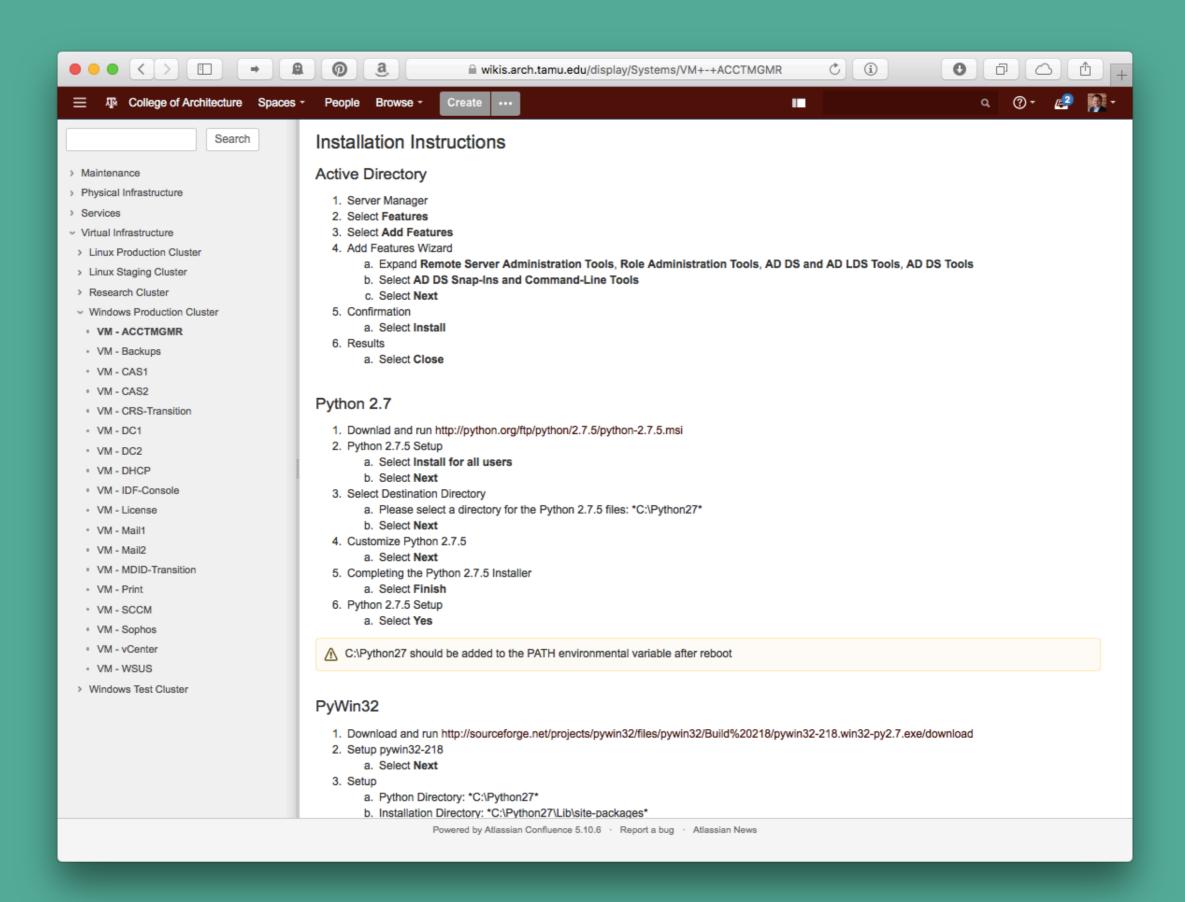
- predictability
- efficiency
- security
- maintainability

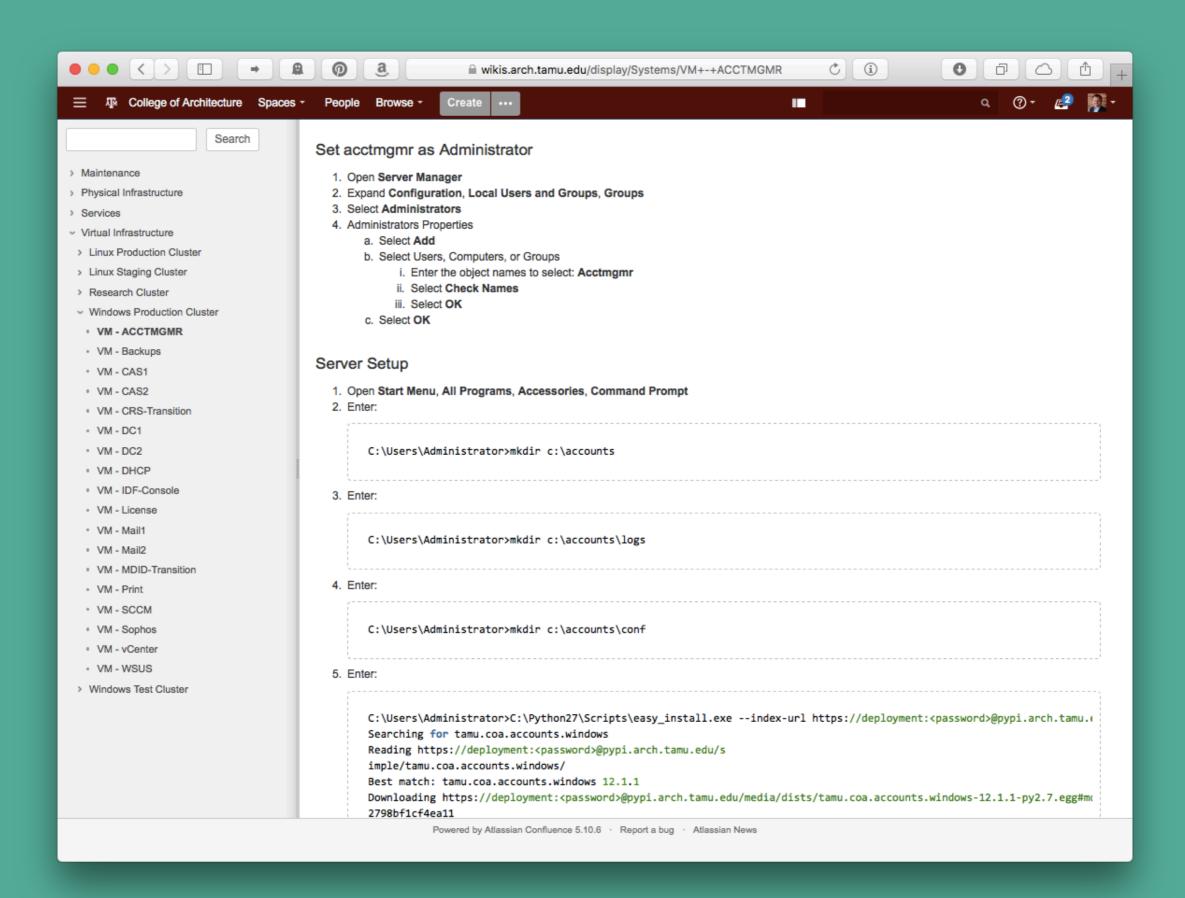
#### DevOps emphasizes:

- automation whenever possible
- infrastructure as code
- continuous integration / delivery
- collaborative teams with shared responsibility

#### Infrastructure as Code

So our systems are not defined like this—





#### But rather, like this—

```
include_recipe 'nginx'
include_recipe 'git'
directory '/var/www' do
 action :create
 owner 'www-data'
 group 'www-data'
end
git node['magic']['directory'] do
 user 'www-data'
 group 'www-data'
 reference 'master'
 repo 'git://github.com/TAMUArch/magic'
end
```

#### Main lessons from The Phoenix Project

There are 4 types of work
Work-in-progress is the silent killer
Unplanned work accrues technical debt

**Bottlenecks constrain work** 

#### Four types of work

- 1. Business projects
- 2. Infrastructure projects
- 3. Changes
- 4. Unplanned work

#### The Three Ways

- 1. Systems thinking
- 2. Amplify feedback loops
- 3. Culture of continual experimentation and learning

#### Related emphases

**Business value** 

Collaboration requires empathy and trust

Blame-free thinking

### Back to Culture

# Changes we made in Architecture were mostly about culture

#### Caveats

No silver bullet

Staying the course is hard

Need commitment from the whole team

#### More reading

#### On DevOps and organizational culture:

Empathy: The Essence of DevOps http://blog.ingineering.it/post/72964480807/empathy-the-essence-of-devops

DevOps Culture (Part 1) http://itrevolution.com/devops-culture-part-1/

Continuously Deploying Culture: Scaling Culture at Etsy http://www.slideshare.net/mcdonnps/continuously-deploying-culture-scaling-culture-at-etsy-14588485

#### More reading

#### On DevOps methodologies:

The Phoenix Project: A novel about IT, DevOps, and helping your business win (IT Revolution Press) http://itrevolution.com/books/

Where To Learn More About Concepts In "The Phoenix Project" (Part 1) http://itrevolution.com/learn-more-about-concepts-in-phoenix-project/

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# Open discussion