



# ArcGIS Open Data for Developers

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# Introduction

Matt Jones

# What is Open Data?

- Open data is data that is:
  - Technically open (machine readable formats) – CSV, KML, shapefile etc.
  - Legally open (you and me can use and redistribute)
  - Free!

# Why make data open?

- **Many organisations have mandates to comply with to make data available**
- **Organisations realise the benefits of Open Data and want to get it out there**
  - Transparency
  - Participation
  - Improve data quality
  - Self-empowerment
  - Improved or new private products and services
  - Innovation
  - ...

## Good open data according to the Open Data Institute

- Can be linked to, so that it can be easily shared and talked about
- Is available in a standard, structured format, so that it can be easily processed
- Has guaranteed availability and consistency over time, so that others can rely on it
- Is traceable, through any processing, right back to where it originates, so others can work out whether to trust it

# Barriers to making data open

- **It's difficult**
  - Create Portal, make data available in multiple formats
- **It's expensive**
  - Resources
  - Hardware
- **It needs to be maintained**

# Open data in the ArcGIS hub

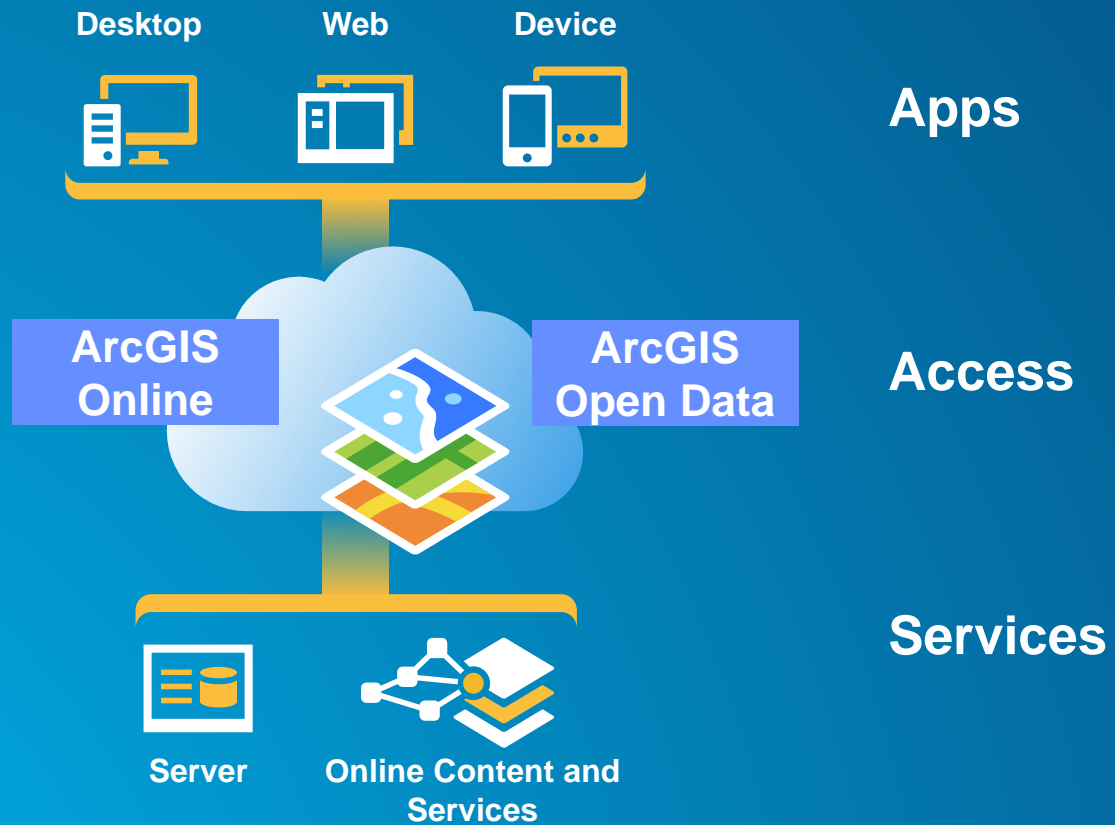
- **Complete Open Data solution for Operational tables and Spatial Data**
  - 8,000+ Organisations around the world
  - 70,000+ Datasets shared into Open Data
  - 20,000,000+ Downloads in 2016
- **Provide Custom Sites you control**
  - Unlimited bandwidth and API usage
  - No restriction on the number of datasets
  - Auto-generated downloads
  - Suite of applications to provide context
  - ArcGIS sharing model



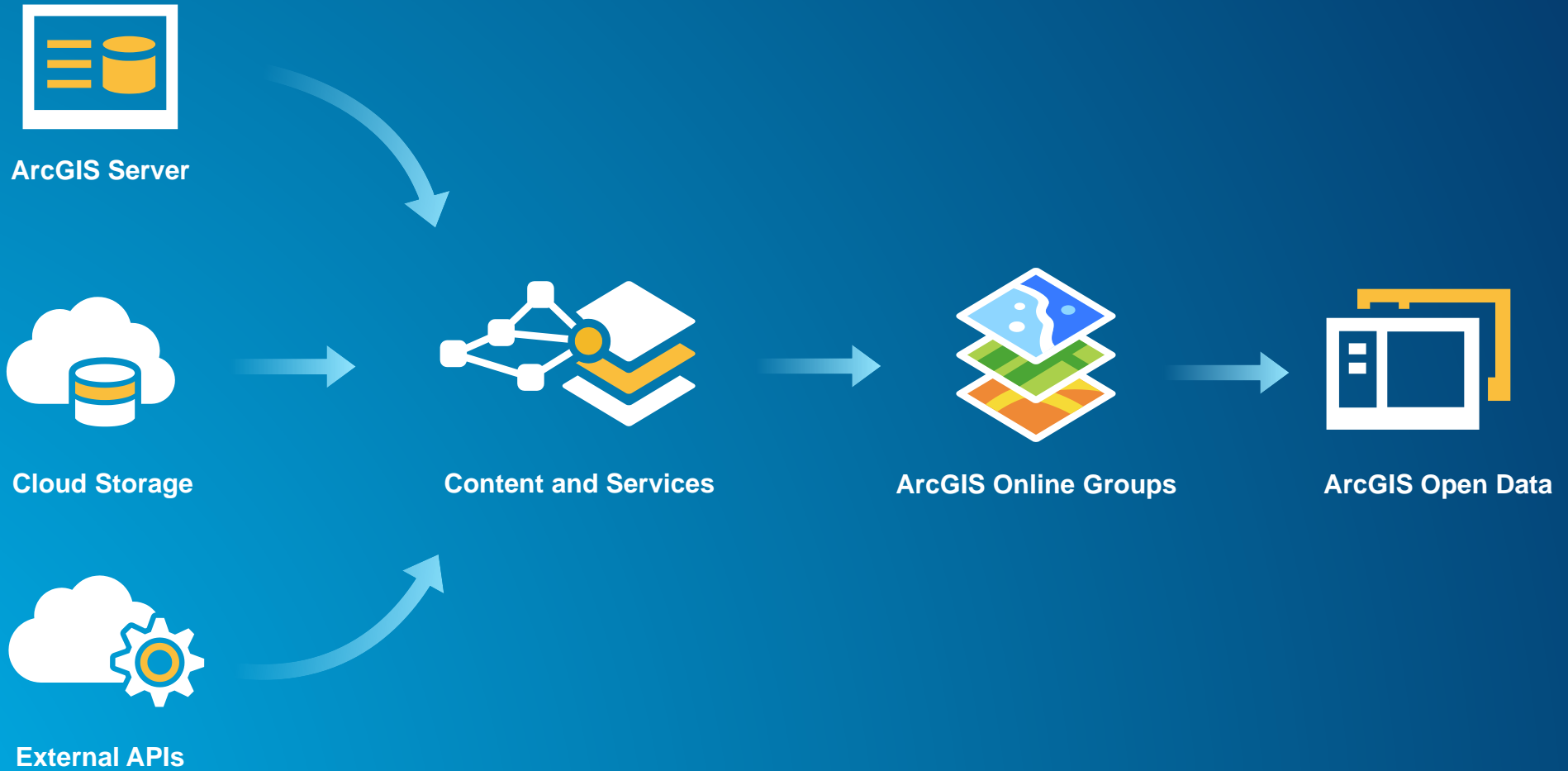
# ArcGIS Open Data

Matt Jones

# Part of the ArcGIS Platform



# Use existing services and familiar workflows



# Supported item types

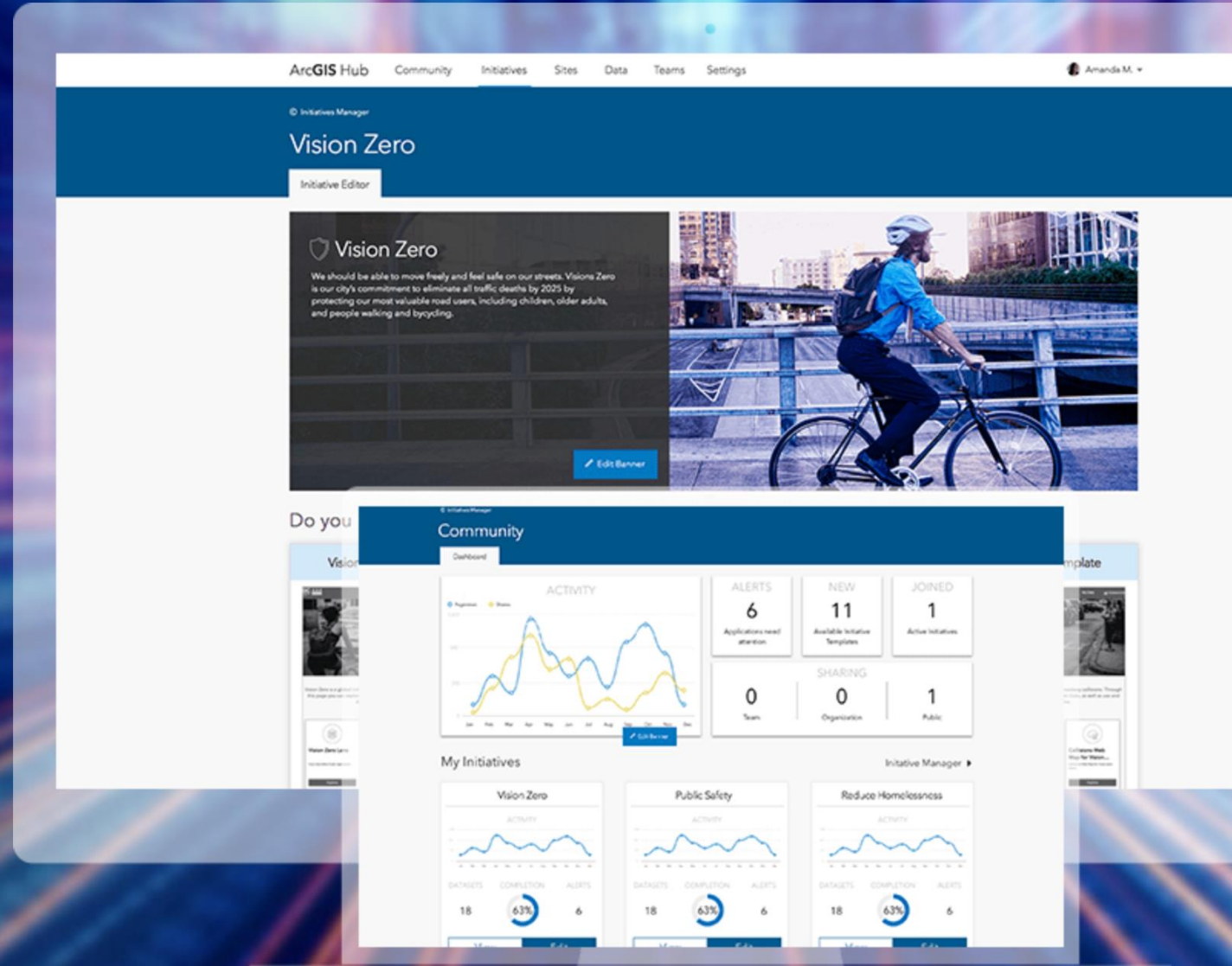
- Hosted feature services
- ArcGIS Server feature services
- ArcGIS Server map services
- Image services
- CSVs
- Web maps
- URLs
- Documents
- PDFs



# ArcGIS Hub

Transform how you engage and collaborate with your community

ArcGIS Hub provides a two-way engagement platform to connect government and citizens



# Demo of ArcGIS Open Data

Jess Wynne



# Extending ArcGIS Open Data

Matt Jones

## Federate your data

- Establish persistent linkages between ArcGIS and CKAN repositories
- Update your data in one place
- Compliant with DCAT specification
- Structured, queryable, usable
- E.g. <http://berlinfordevs-techresearch.opendata.arcgis.com/data.json>



# Open Data API

- Simple example

- `http://berlinfordevs-techresearch.opendata.arcgis.com`(base url)
- `/datasets` or `data` (resource)
- `.json` (format)
- `?q=wifi` (query)
  
- `http://berlinfordevs-techresearch.opendata.arcgis.com/data.json?q=wifi`
- (endpoint)
- `http://berlinfordevs-techresearch.opendata.arcgis.com/datasets?q=wifi`
- (same query but rendered in a web page – we consume the same API)

- [Open Data API Explorer on GitHub](#)

- [Open Data Ember on GitHub](#)

## Useful Links

- ArcGIS Open Data - <https://hub.arcgis.com/pages/open-data>
- Tips, Tricks and Samples for customising your Open Data page - <https://hub.arcgis.com/pages/site-customization>
- JavaScript library for customising charts etc.s - <https://esri.github.io/cedar/>
- Identify the right Creative Commons license for your data - <https://creativecommons.org/choose/>



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