

Maximising the Power of Web GIS with ArcGIS Online

Lebogang Mashishi & Leigh Thomas



THE SOUTHERN AFRICA ESRI USER CONFERENCE 2023



Topics that we'll cover in our session...

- Introduction to ArcGIS Online and its capabilities
- Setting up an ArcGIS Online account and understanding licensing options
- Navigating the ArcGIS Online user interface
- Adding and managing data in ArcGIS Online
- Creating and editing web maps
- Adding and configuring layers to web maps
- Sharing maps with others and publishing web apps
- Exploring ArcGIS Online apps and templates
- Best practices for working with ArcGIS Online



Introduction to ArcGIS Online and its Capabilities

Lebogang Mashishi



Overview

What is ArcGIS Online

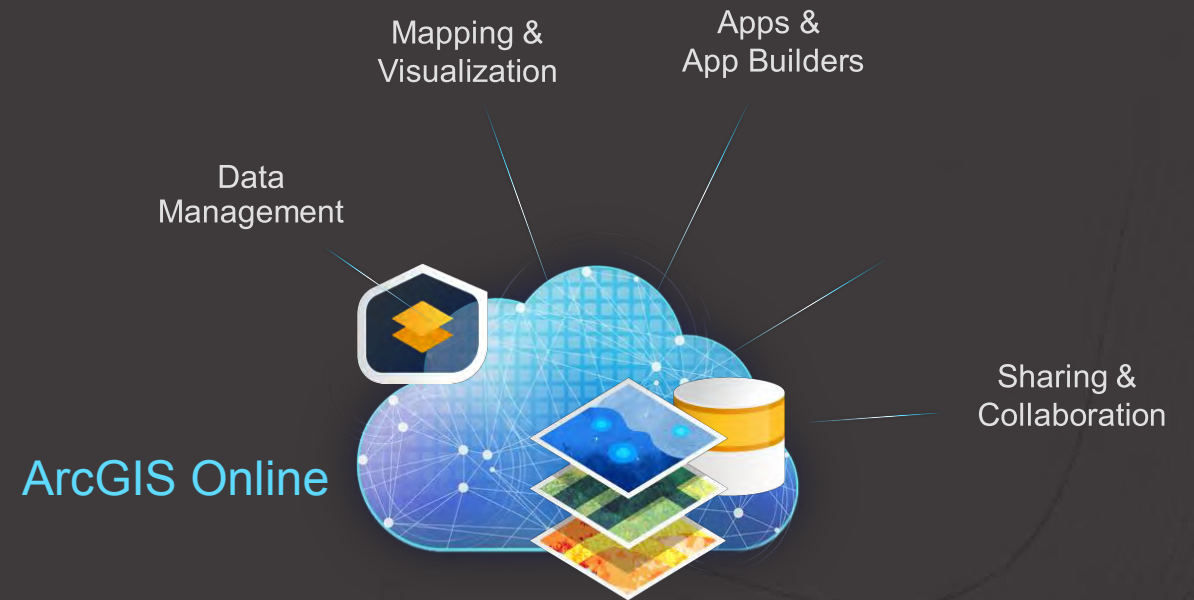
- Web GIS
- Cloud-based mapping & analysis solution
- Software-as-a-Service (SaaS) model
- World's largest web mapping platform
- Global and inner reach



Capabilities

What you can do with ArcGIS Online

- Create maps, scenes, apps, and notebooks
- Sharing of Maps and Apps
- Collaboration of teams
- Explore and analyse data
- Manage data
- Be mobile in the field



Benefits

Understanding organisational benefits

- Scalability
- Low overhead
- Agile
- High Availability
- New releases and updates
- Reduced time to start-up
- Enterprise System Integration
- Flexible Pricing
- Secure and private

Benefits

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- Enterprise System Integration
- Flexible Pricing
- Secure and private
- Premium Options

The screenshot shows the Esri Premium Feature Data Store product page. The page title is "Premium Feature Data Store". Below the title, there is a description: "Increase your ArcGIS Online subscription feature data storage and support for intensive query, edit, analysis, and extract, transform, and load (ETL) with one of four Premium Feature Data Store levels. Each level provides twice the power of the previous, with the highest level (M4) offering 16 times the compute available with Standard Feature Data Store. Each ArcGIS Online subscription has only one feature data store; these levels cannot be combined." Below this description, there are two product cards. The first card is for "M1 Premium Feature Data Store" and lists "1 TB feature data storage" and "Provides dedicated feature data compute and feature data storage". The second card is for "M2 Premium Feature Data Store" and lists "2x M1 support for feature data query, edit, analysis, and ETL", "1 TB feature data storage", and "Provides dedicated feature data compute and feature data storage". Both cards have a "Contact us" button. The page also includes a navigation menu with "Products", "Industries", "Support & Services", "Stories", and "About".

Setting up an ArcGIS Online Account and Understanding Licensing Options

Lebogang Mashishi



Overview

Role Players

- Administrator
- GIS Professional
- End User



How to Get Started

Activate Subscription

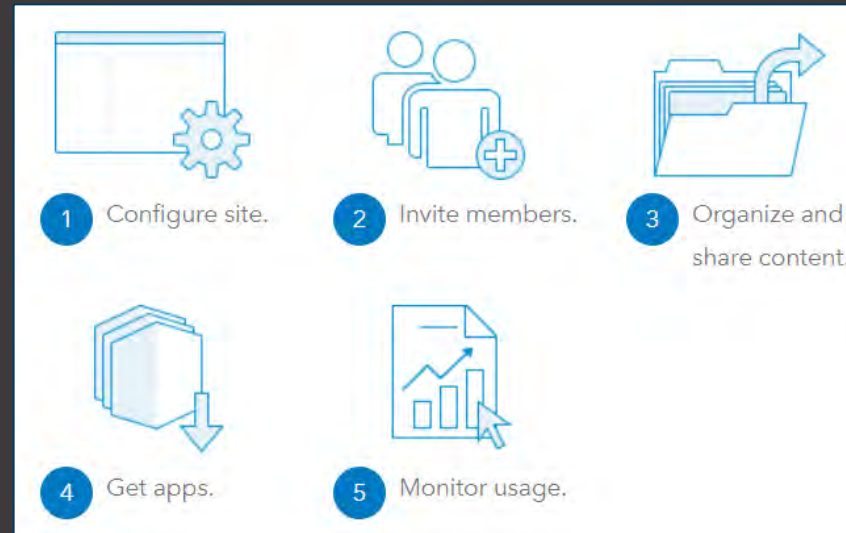
- Public vs Organisational
- Activation Email from Esri
- Provide a name for your organization
- Provide a short name
- Choose the region
- Set Credentials

The image shows two overlapping screenshots. The top one is an email from Esri with the following text: "Hello:", "Here is the information for activating your ArcGIS Online subscription.", "To activate your subscription, click the following link or copy it into your browser:", "<https://www.arcgis.com/home/activate.html?activationcode=>", "An act", and "Review the [terms of use](#).". The bottom screenshot is a web page titled "Activate your organizational subscription" with a navigation menu (ArcGIS, Pricing, Map, Scene, Help) and three radio button options: "1 Activate your organizational subscription", "By creating a new account" (selected), and "By converting an existing ArcGIS Public Account". A "Next" button is visible in the bottom right corner.

How to Get Started

Administrative Next Steps

- **Configure** Site
- **Invite** and **Add** Members
- **Organize** and **Share** Content
- **Get Apps**
- **Monitor** Usage



Types of User Types

An Overview

- **Foundational** User Type
- **Dependent** User Type
- User Type **Extension**

Types of User Types

An Overview Comparison

Viewer



Editor



Mobile Worker



Creator



GIS Professional



Least Amount of
Capabilities



Most Amount of
Capabilities

Types of User Types

Dependent vs Foundational

Viewer



Editor



Mobile Worker



Creator



GIS Professional



Dependent User Type

Foundation User Type

Types of User Types

Credit allocation

Viewer



Editor



Mobile Worker



Creator



GIS Professional



0

250

250

500

500

ArcGIS App Bundles

Viewer

Essential App Bundle

- ArcGIS Map Viewer & Scene Viewer
- ArcGIS StoryMaps
- ArcGIS Instant Apps
- ArcGIS Experience Builder
- ArcGIS Web App Builder
- ArcGIS Dashboard
- ArcGIS Hub Basic
- ArcGIS AppStudio Basic
- ArcGIS for Power BI
- ArcGIS Maps for Adobe Creative Cloud

Field Worker App Bundle

- ArcGIS Field Maps
- ArcGIS Survey123
- ArcGIS Workforce
- ArcGIS Quick Capture

Office App Bundle

- ArcGIS for Excel
- ArcGIS for PowerPoint
- ArcGIS for SharePoint
- ArcGIS for Teams

Types of User Types

Viewer

- **View** items that are shared with them by other ArcGIS users and have access to a selection of apps
 - Essential Apps
 - Office Apps
- Typically for:
 - Consumers of GIS Services like managers, executives, non-GIS professionals



Types of User Types

Editor

- **View** and **edit** data in ArcGIS maps and apps that are shared with them by other ArcGIS users.
 - Essential Apps
 - Office Apps
- Typically for:
 - GIS Data Capturers, Analysts or anyone who works behind the computer to create or modify GIS data



Types of User Types

Mobile Worker

- **View** and **edit** data in ArcGIS maps and apps that are shared with them by other ArcGIS users.
 - Essential Apps
 - Field Apps
 - Office Apps
- Typically for:
 - Field data capturers, or people who primarily interact with content on the field



Types of User Types

Creator

- **Create** and **edit** content such as maps and apps, perform **spatial analysis** using the analysis tools, collect data, and **collaborate** and **share** content for use in apps
 - Essential Apps
 - Field Apps
 - Office Apps
- Typically for:
 - System Admin, GIS Specialist and other content creators & collaborators.



Types of User Types

GIS Professional

- **Build** advanced 2D and 3D maps, visualizations, and analyses using **ArcGIS Pro** as well as use ArcGIS Online/ArcGIS Enterprise to **create**, **edit**, and **collaborate** and **share** content for use in apps.

- Essential Apps
- Field Apps
- Office Apps
- ArcGIS Pro (Basic, Standard or Advanced)

- Typically for:

- System Admin, GIS Specialist and other content creators & collaborators.



Understanding Licensing Options

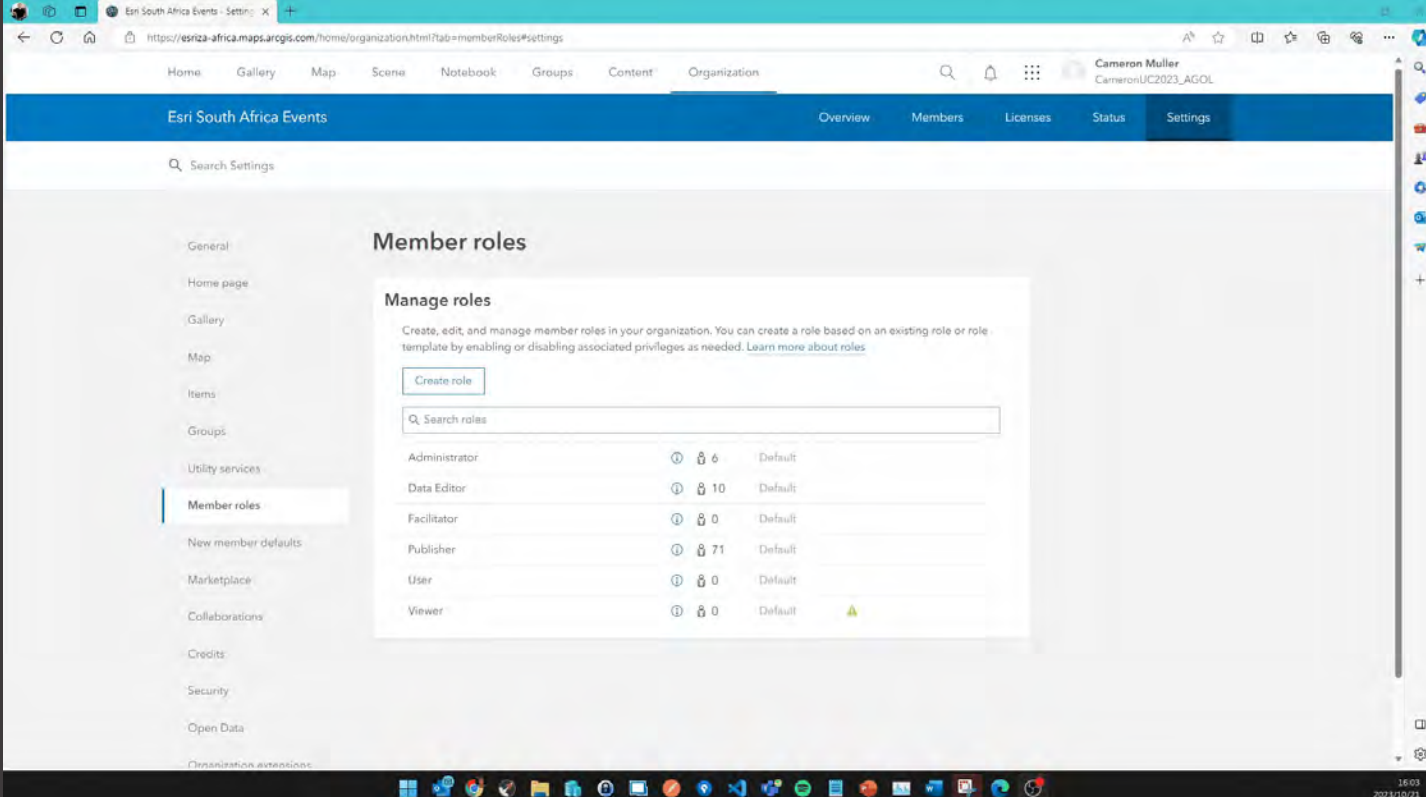
Privileges

- Determined by the Role
- Role limited by User Type
 - Administrator
 - Data Editor
 - Facilitator
 - Publisher
 - User
 - Viewer

Understanding Licensing Options

Privileges

- Determined by the Role
- Role limited by User Type
 - Administrator
 - Data Editor
 - Facilitator
 - Publisher
 - User
 - Viewer
- Default vs Custom
- Rule of least privileged




The screenshot displays the 'Member roles' management interface in the Esri South Africa Events organization settings. The page includes a navigation menu on the left with options like General, Home page, Gallery, Map, Items, Groups, Utility services, Member roles (selected), New member defaults, Marketplace, Collaborations, Credits, Security, and Open Data. The main content area is titled 'Member roles' and contains a 'Manage roles' section with a 'Create role' button and a search bar. Below the search bar is a table listing the roles and their counts.

Role	Count	Default
Administrator	6	Default
Data Editor	10	Default
Facilitator	0	Default
Publisher	71	Default
User	0	Default
Viewer	0	Default



Navigating the ArcGIS Online Interface

Lebogang Mashishi

An abstract graphic on the right side of the slide. It features several thick, curved lines in shades of blue, orange, and yellow. Below these lines is a pattern of colorful hexagons in shades of blue, green, and red. The background is dark grey.

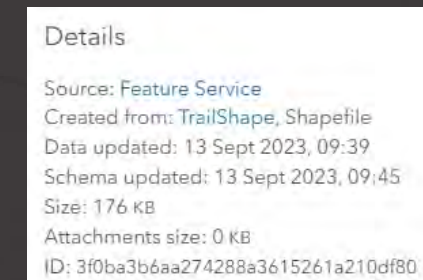
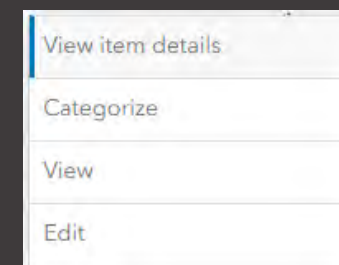
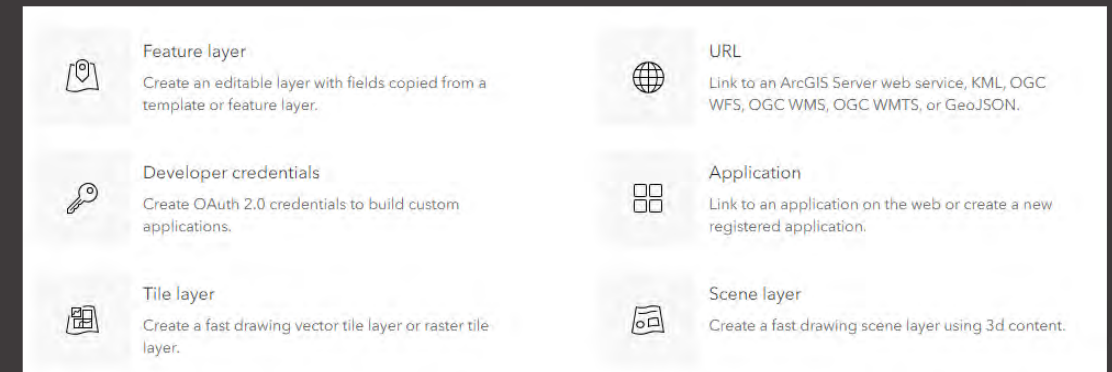
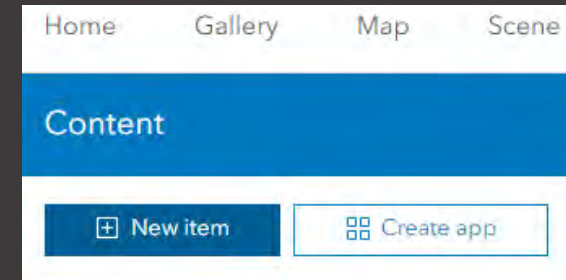
Adding and Managing data; Creating web maps; Sharing and publishing web apps in ArcGIS Online

Leigh Thomas

Adding & Managing Data

Overview

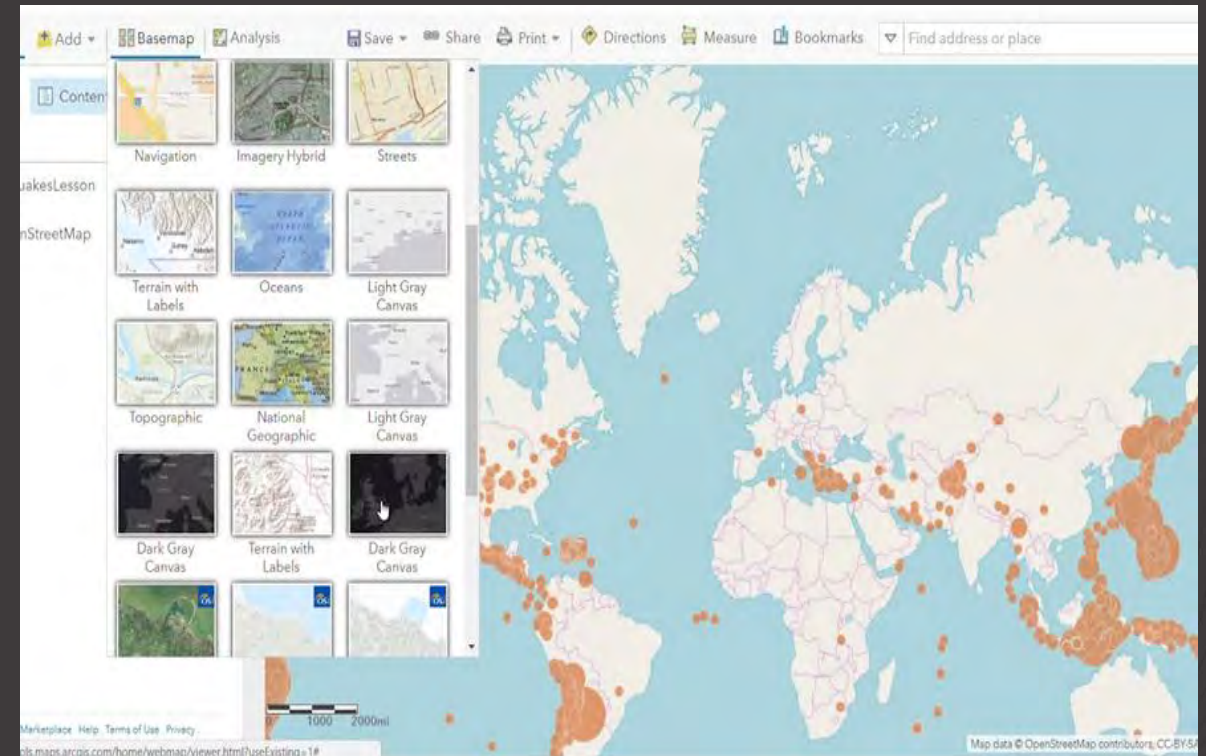
- Add data to your organization
- Manage settings and details
- Use the layers in maps, scenes and apps



Creating & editing web maps

Overview

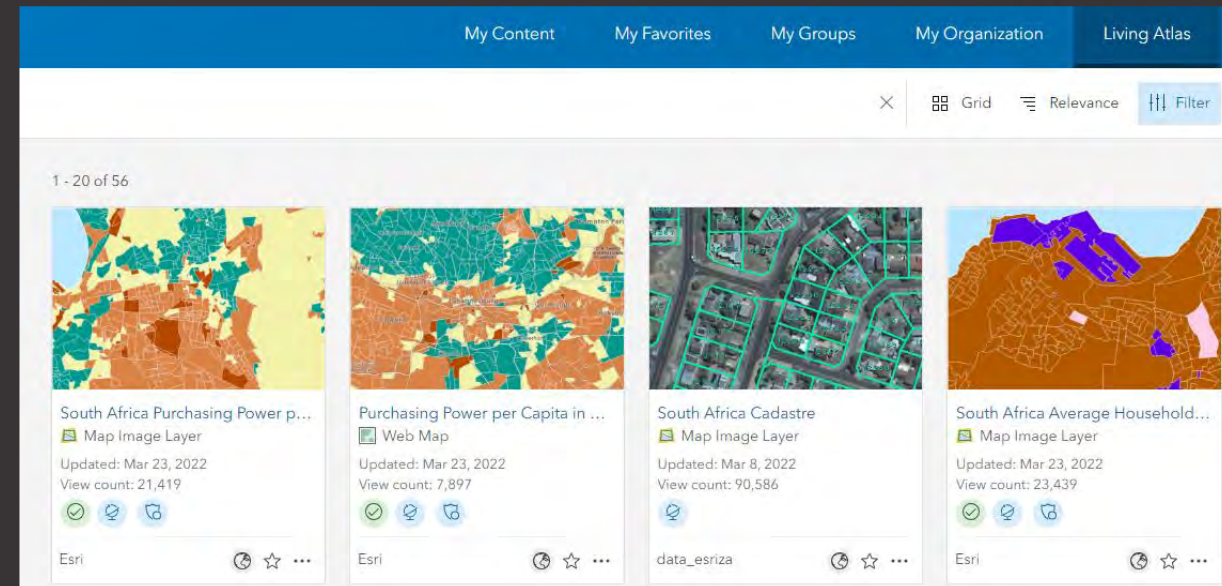
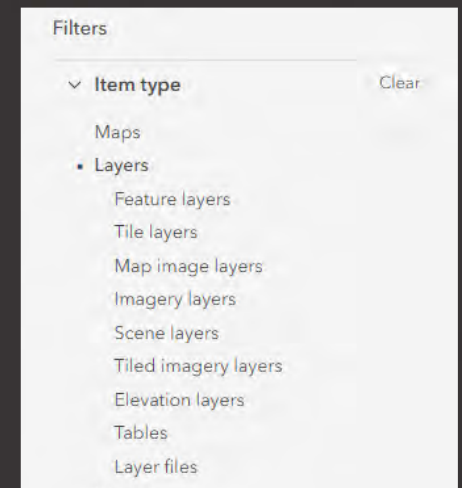
- Use to tell stories and answer questions
- Basemap, data layers, extent and navigation tools
- Styles and Pop-ups
- Create in ArcGIS Pro, modify in ArcGIS Online – intercompatibility
- Adding & configuring layers to web maps



Adding layers to web maps


Layer types

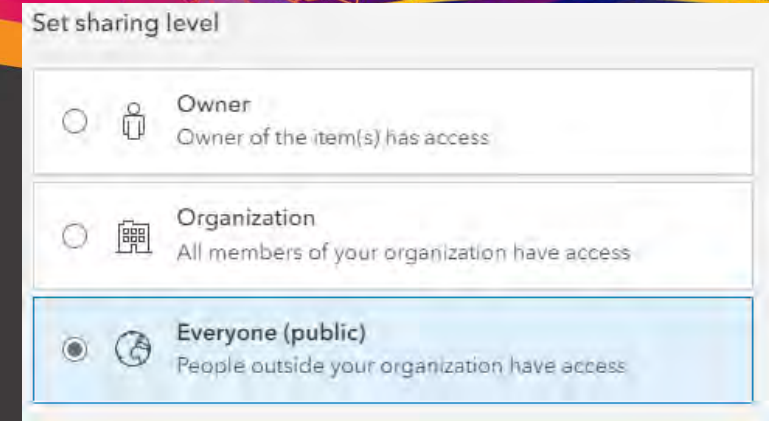
- Layers are contents of the map
- Public, organization & subscription layers
- Types of layers:
 - Map service
 - Feature service
 - Image service
 - KML
 - OGC WMS
 - CSV
 - Delimited text file (.csv and .txt)
 - Shapefile (.zip)
 - GPS file (.gpx)
 - Editable layers created in the ArcGIS.com map viewer (map notes)



Sharing maps & publishing apps

Considerations

- Layers in the map also need to be shared
- For a map to be accessible to the public (and if your organization allows sharing outside the organization), you must share it with everyone – share the public URL to the map (https://www.arcgis.com/mapviewer/index.html?webmap=<map_id>) rather than the URL that includes your organization name (https://<organization_name>/mapviewer/index.html?webmap=<map_id>)
- You can create an app with a map from the My Content tab of the content page or from the Map Viewer using the Create app button 



Exploring ArcGIS Online apps and templates

Considerations

- Purpose - Embedded in this goal is your intended audience: Who is going to use your app and what are the key points that you want them to take away from the experience?
- Functionality - What is the critical functionality needed to support that goal?
- Aesthetic - How does the app's layout and color scheme support your brand or message?

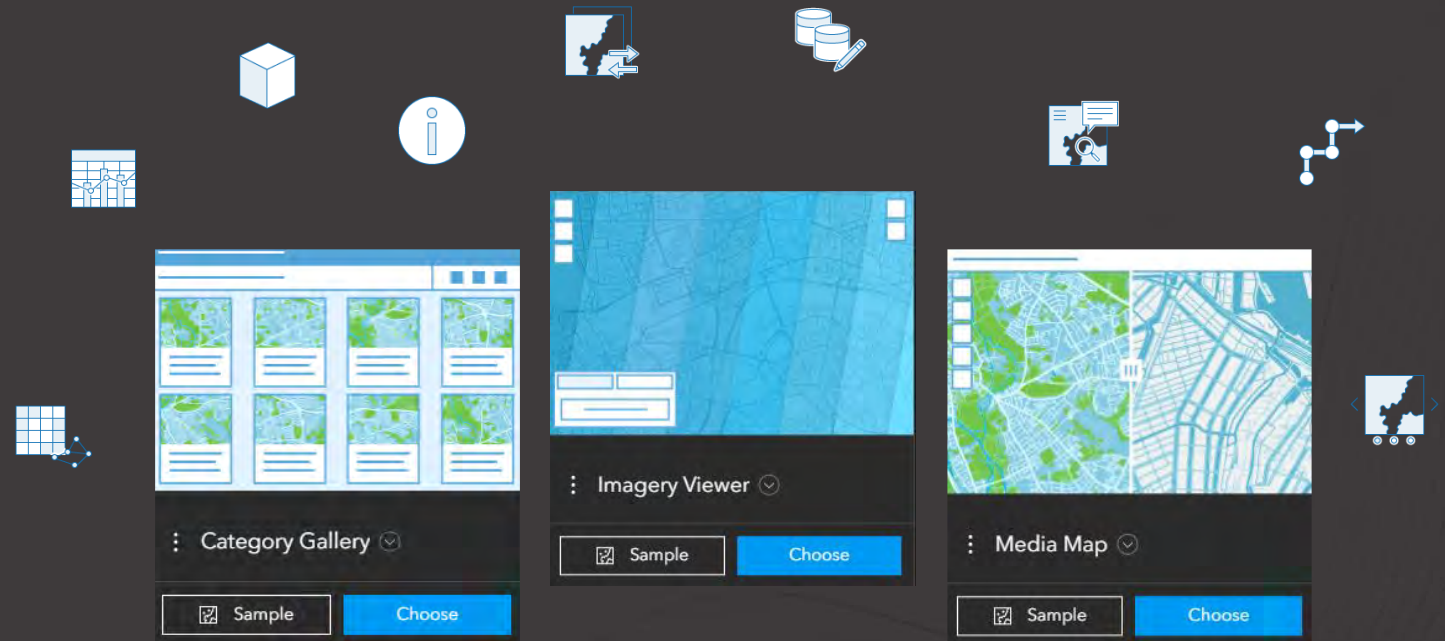
1. What is your goal for the app?

- Showcase one or more maps with essential tools
- Allow viewers to interact with your data
- Provide public information
- Display a variety of features and content types

Exploring ArcGIS Online apps and templates

Template Types

- Collect and Edit Data
- Compare maps and layers
- Display a scene (3D)
- Explore & Summarize data
- Interpret imagery
- Make a gallery
- Provide local information
- Route and get directions
- Showcase a map



Best practices for Working with ArcGIS Online

Lebogang Mashishi



Overview

- Monitor and Tracking
- Reporting
- Members
- Content
- Administration

Credits

What they are

- What are credits?
 - Currency used across ArcGIS and are consumed for specific transactions and types of **storage**, **premium content** and **analysis**
- Why do we pay for credits?
 - ArcGIS Online **maintains** servers, **processes** data, and it **curates** content.

Credits

What consumes credits?

- Storage

- Common storage types: **feature** storage, **tile** storage, and **file** storage.
- Others: **scene** storage, **notebook** storage, **vector tile** storage, **imagery** storage

- Transaction based tools

- Geocoding, GeoEnrichment, image analysis, and spatial analysis tools.
- Charged based on the **number of records** and the generated output.

Credits

How are credits calculated

- Storage costs are associated with **size** and **time**
 - For feature storage - **2.4** Credits per **10MB** stored per month
 - For tiled imagery – **1.2** credits per **1GB**
 - For dynamic imagery costs are based on image size and number of images – **1-10** images is **10** credits per day
- Transaction based tools are usually calculated based on the transaction
 - **1** Service area is **0.5** credits per drive time
 - **1** Report is **10** Credits
 - **40** credits per **1000** geocodes

Credits by capability

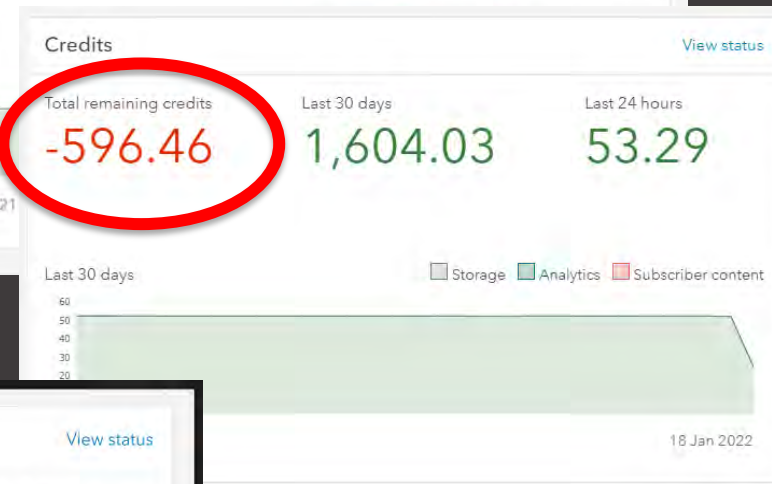
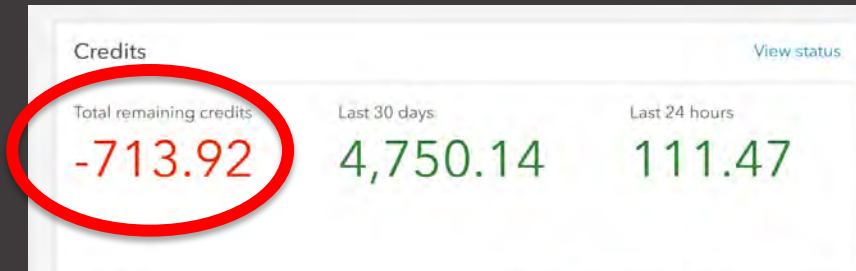
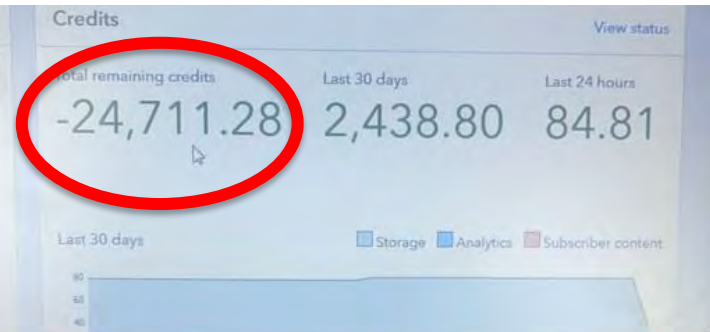
Use the table below to estimate how many credits you will need to perform specific transactions or store data:

Capability	Example of where used	Credits used
Feature storage, excluding feature attachments, feature collections , and features associated with location tracking	Store a hosted feature layer	2.4 credits per 10 MB stored per month, calculated hourly Note: Feature layer settings , such as Enable Sync and Keep track of created and updated features , can increase storage size over time.
		For tiled imagery, storage costs are 1.2 credits per 1 GB stored per month, calculated hourly. Note: Credits for tiled imagery storage are calculated based on the size of the image files stored.

Credits

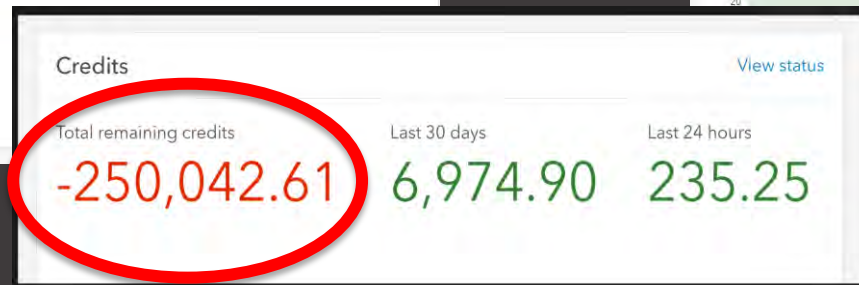
Account Restricted

⚠️ Your organization is in a restricted state. All members are currently unable to perform some actions that require credits. [Remove restrictions](#)



ArcGIS Online Overview page showing a negative total remaining credits of -82,474.92. The page also displays the activation date (11/20/2019) and renewal date (9/3/2022). A red circle highlights the negative total remaining credits value.

Total remaining credits	Activation Date	Renewal Date
-82,474.92	11/20/2019	9/3/2022



Credits

Account Restricted

- Restricted state is when an organization uses **all** its credits
- Can't Use:
 - Premium content
 - Batch geocoding
- Negative credits **have to** be paid

Members

Credits, Groups, Licenses and Security

- Credits:
 - Set budgets
 - Estimate
 - Monitor
- Groups:
 - Auto add
- Licenses:
 - New member defaults
 - Custom Roles
- Security:
 - Configure organization-specific logins

Content

Basemap, Categories, Sharing and Templates

- Basemap:
 - Vector Styling Editor
- Governance:
 - Content categories, tags, descriptions
- Sharing:
 - Manage sharing approach
- Templates:
 - Esri defaults
- Optimisation:
 - Map content optimisation

Administration

Contacts, Renewal, Uptime

- Contacts:
 - Assign more than a single contact
- Renewal:
 - Mark renewal date in your calendar/device
- Uptime:
 - System Status



Questions

Please share your feedback in the UC2023 app

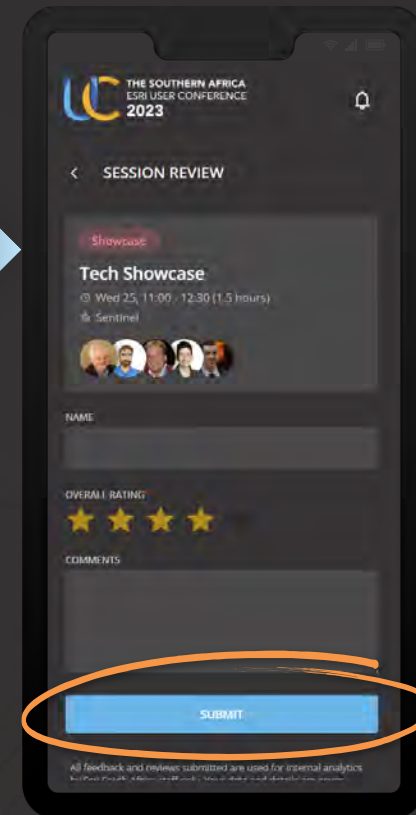
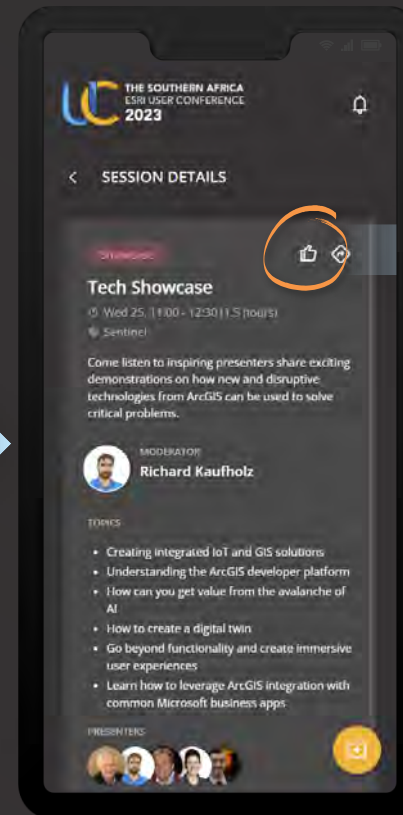
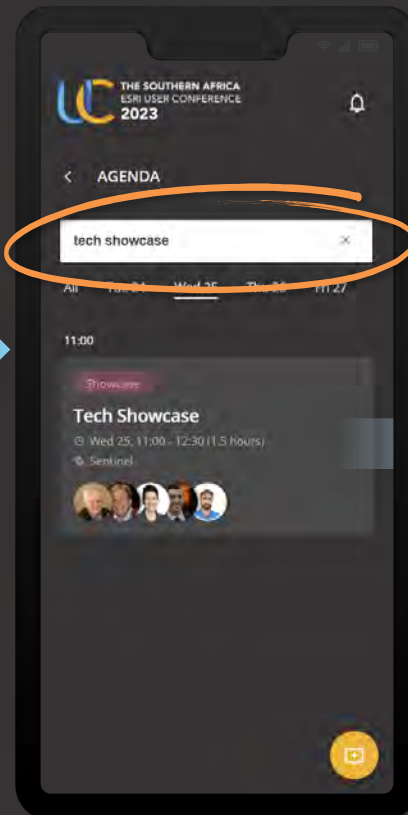
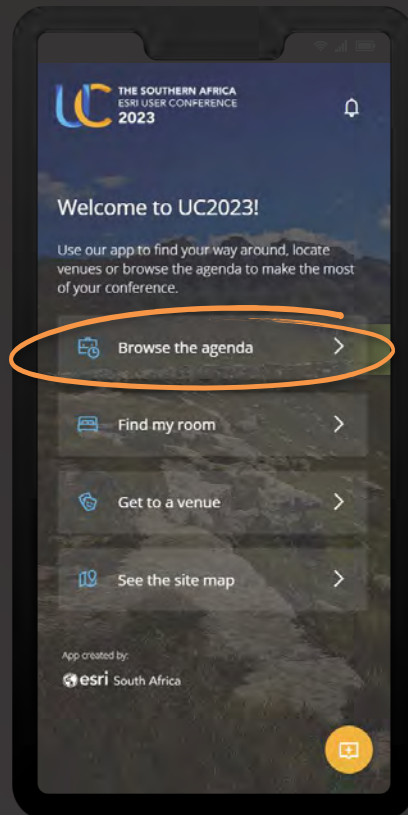


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Search and select the
session you attended

Click the “thumbs up”
icon

Complete and submit
your review





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2023**

CONNECTING COMMUNITIES