EFFECTIVE STORY MAP PRODUCTION:
Life Cycle Approach for Developing Story Maps

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AGENDA

BACKGROUND

STORY MAP HOSTING PLATFORMS/OPTIONS

STORY MAP DEVELOPMENT LIFE CYCLE

REPI STORY MAP DEMO
BACKGROUND

MOTIVATION FOR THIS PRESENTATION

Capture the indicators that might better guarantee success and long term sustainability of the story map development effort.

▪ Need for a framework to help guide development of our story maps
▪ Need to highlight the involvement of the right team members with the right expertise
▪ Need to capture the impact of hosting options on story map design, implementation, deployment, and transfer
The development of a story map can be significantly impacted by how it is hosted. The hosting option selected may dictate the possible levels of customization, level of effort, and total cost for the story map.

- **Online Option (ESRI ArcGIS Online)**
  - Hosted and managed by ESRI

- **Download Option (ESRI Story Map Downloadable Template)**
  - Partly hosted and managed by ESRI, partly managed locally

- **Portal Option (ESRI Portal for ArcGIS)**
  - Fully hosted and managed locally using ESRI Portal for ArcGIS software

- **Fully Customized Option (Based on ESRI JavaScript API)**
  - Fully hosted and managed locally using ESRI Software and other third party software and tools
The phases and tasks involved in the development of a story map application are similar to those for software development.

The general life cycle phases can be broken down as follows:

Based on a typical waterfall model used in software development.

- Other models such as Agile, Prototyping, Spiral Method, Iterative and Incremental Method can also be considered.

- The waterfall model is used here to explain the key considerations needed for the development of the story map.
Planning must consider the following:

- **Purpose**
  - Consider the main message and the target audience
  - Specific requirements of the audience
  - Typical mode of accessing the story map (phone, tablet, desktop)

- **Features**
  - Key functional features needed in the story map
  - Are any of those features available in ESRI templates or do they need to be developed?
  - Use of graphics, maps, charts
  - Effectiveness of layouts as well as selection of font sizes and colors

- **Data**
  - Review different types of data needed to convey message and their potential sources (external services or uploads, public or private)
REQUIREMENTS AND PLANNING - CONTINUED

Planning must consider the following:

- **Research**
  - Conduct research to find similar story maps available at storymaps.arcgis.com.
  - Check for availability of key required features in existing story map templates

- **Other considerations**
  - Platform the story map will be hosted on, ArcGIS Online or local environment
  - Specific security considerations
  - Organizational resources available for development (time and cost)
  - How will the story map be managed over time (certain features may create new management challenges)
# DESIGN

The layout and page design along with the flow of the story will be governed to a significant extent by the hosting option selected.

The hosting options impact the design in the following ways:

<table>
<thead>
<tr>
<th>Hosting Options</th>
<th>Considerations</th>
</tr>
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</table>
| Online          | - Somewhat limited to the structure of the templates.  
                  - There are options to select variations of layouts as well as color schemes. |
| Download        | - Same options as **Online**, but can be customized to replace certain components.  
                  - Additional behavior can be added using JavaScript. |
| Portal          | - Same as **Online**.  
                  - Further customization may be possible because of total control over the hosting environment |
| Custom          | - Provides the option for full customization and including custom layouts and page flows.  
                  - No limitations on the features that can be added. |
IMPLEMENTATION AND TESTING

The implementation, as in the case of the design, will be governed to a significant extent by the hosting option selected in the following ways:

<table>
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<tr>
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<tbody>
<tr>
<td>Online</td>
<td>-Implementation must be done using Online ESRI Story Map templates</td>
</tr>
</tbody>
</table>
| Download        | -Initial implementation with Online ESRI templates  
-Download and customize using local software development tools (Notepad, Eclipse, Visual Studio). |
| Portal          | -Implementation using ESRI Story Map templates  
-May also be able to implement some customization. |
| Custom          | -Implementation requirements depends on the complexity of the solution. Could be simple or full blown software development. Tools could be Notepad to Visual Studio or Eclipse.  
-Minimal to no reliance on ArcGIS Online or Portal for ArcGIS |
DEPLOYMENT AND HOSTING

Environments must consider the necessity and setup requirements for development, staging, production environments. Deployment strategies will vary based on the hosting platform:

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<td>Online</td>
<td>-Use of different AGOL accounts or folders within AGOL single account</td>
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</table>
| Download        | -Use of different AGOL accounts or folders within AGOL single account  
                  -Manage dev, staging and prod in local environment. |
| Portal          | -Use of different accounts or folders within single account  
                  -Potential option of different environments being on different servers |
| Custom          | -Options for managing the development, staging, and production versions and locations of story map will be dependent on the software development policies and culture of the organization. |
## TRANSFER AND MAINTENANCE

Where necessary, the requirements for the transfer or migration of the story map to its production environment or to the owner/client environment will vary based on the hosting option:

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<td>Online</td>
<td>- Use ArcGIS online assistant tool to migrate story map to the new organization’s environment such as ArcGIS Online account or Portal for ArcGIS (<a href="https://ago-assistant.esri.com/">https://ago-assistant.esri.com/</a>).</td>
</tr>
</tbody>
</table>
| Download        | - Use ArcGIS online assistant tool to migrate story map to the new organization’s environment  
                 - Use appropriate migration tools such as FTP, SCP, to migrate the customized files to new web server environment. |
| Portal          | - Use ArcGIS online assistant tool to migrate story map to the new organization’s environment such as ArcGIS Online account or Portal for ArcGIS (https://ago-assistant.esri.com/). |
| Custom          | - Migration approach will depend largely on the software development and migration practices of the organization or organizations involved. |
MONITORING AND EVALUATION

Monitoring and evaluation can incorporate a number of key tactics:

- Develop basic criteria for evaluating story map such as:
  - number of hits per month
  - access to the story map by certain groups of people
  - a reduction in number of users calling a help line.
- Use appropriate tools (example Google Analytics) to gather statistics on the access and use of story map site
- May be able to build monitoring options into story map application to determine interaction on a page by page or item by item level
- Where possible, use pinging and alerting tools to ensure dependent sites are accessible to prevent broken links
- Use statistics to determine how the goals of the story map are being met
- Identify necessary modifications or adjustments
A good story map relies input from a team of contributors with a variety of backgrounds. The following are some of the key roles that should be considered and their focusing issues:

- **Sponsor** - business needs and financing.
- **Owner** – specific vision for the story map and its potential use.
- **Domain subject matter experts** – accurate concepts in the story map.
- **Organizational branding or design experts** – look and feel as well as general design meeting organizational standards.
- **Data experts** – Data quality and effective format (map, chart, table).
- **Application developers** – technical design and implementation, especially in cases where customization is required.
- **Systems administrators** – smooth transition and operation of story map.
USE CASE – REPI STORY MAP

- For the Assistant Secretary of Defense for Energy, Installations, and Environment’s Basing Directorate ODUSD(I&E), the Readiness and Environmental Protection Integration (REPI) Program, Booz Allen developed an online story map to present a history of the program’s major accomplishments and innovative case studies.

- Benefits of the story map include:
  - Replaces briefings and fact sheets
  - Tells the story through photos and map locations, not just text
  - Linked to the Interactive Map (not static maps)
  - Run through story automatically
  - Easy to update
  - Accessible online
  - Incorporates audio narration
  - Able to incorporate web analytics

- The story map can be accessed by visiting www.repimap.org/storymap
Military installations are important members of their communities, but for years DoD became increasingly concerned about how heavy urban sprawl and regulations to protect endangered species were inhibiting the military’s use of training and testing lands. In response, DoD developed the REPI Program to fund cost-sharing partnerships among the military, state and local governments, and conservation organizations. These partnerships obtain easements or other interests in land from willing sellers to preserve critical lands and habitats near our military installations. Together, these partners can achieve their mutual goals at a scale otherwise not possible.

www.repimap.org
Review of the audio/narration change requirement:

After more than a decade of growth and funding for the REPI Program, partnerships among the military, communities, and conservation organizations have spread across the Nation to safeguard vital testing and training assets and preserve DoD’s flexibility to use its lands as needed to meet training requirements at 88 locations in 30 states. These investments protect training, testing, and operational assets that DoD spent much of the past decade building or modernizing.

Change to: “89 locations in 30 states as of the end of Fiscal Year 2016”

The text containing numbers was specifically excluded from the narration. As a result, there is no need to redo the narration audio.