Mobile Survey Application for Department of Natural Resources

Melissa Gfeller

Project Management – GEOG 6162

11/28/2018

Overview: Justification

- Help the Department of Natural Resources streamline their surveys throughout the year.
- Transition from Paper to Digitized surveys
- Cut out the data entry step for survey data
- Allow the DNR to have standardized surveys for the entire state of Utah

Scope Management

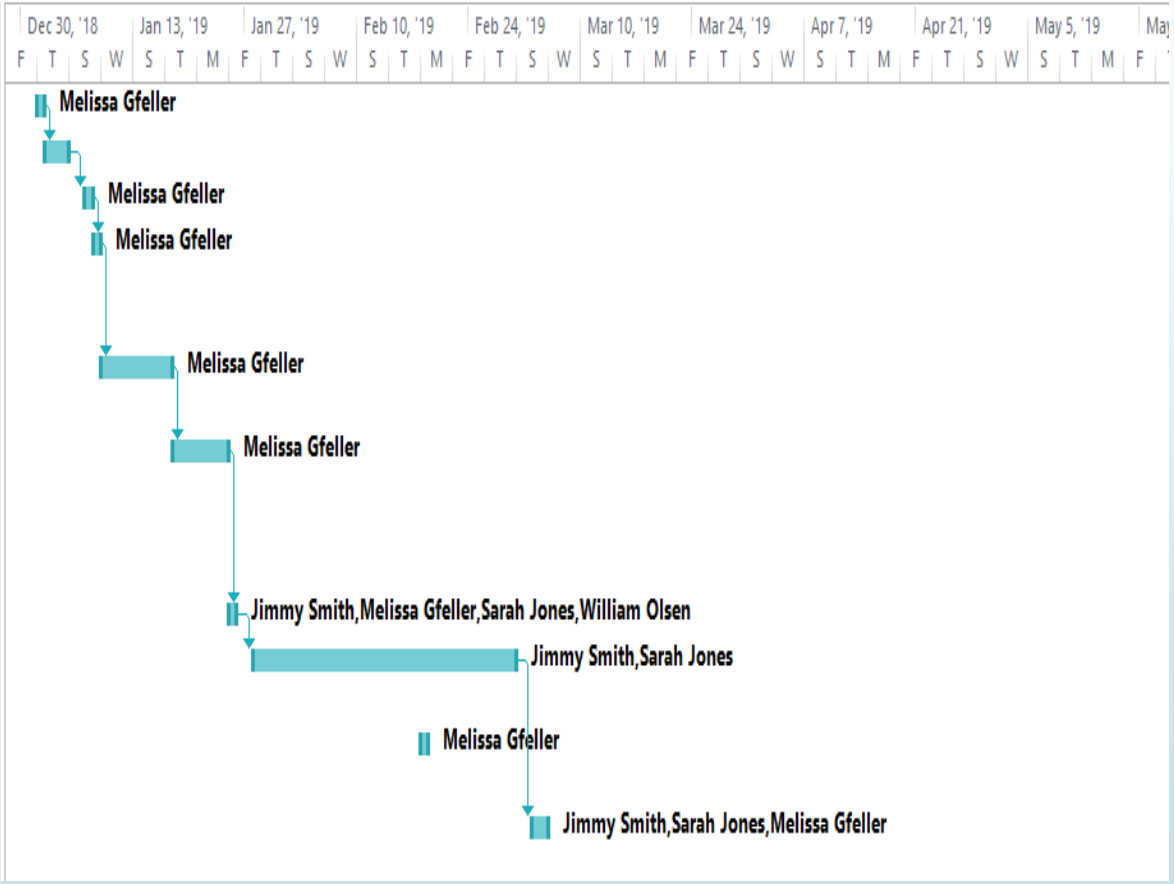
- Requirements:
  - The paper surveys from the DNR
    - Include any Region variation
  - Server to contain the database
  - ArcGIS Enterprise
  - Security features
    - Database access
    - Survey123
    - Microsoft workflow
- Deliverables:
  - Functioning Database for survey data
  - Data accessible through Excel
  - All surveys digitized in Survey123
  - Workflow to convert the survey data to an excel document

Reference:
Scope Statement

Time Management

	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Add
1		Project Proposal Pres	1 day	Tue 1/1/19	Tue 1/1/19		Melissa Gfelle	
2		Project Approval	3 days	Wed 1/2/19	Fri 1/4/19	1		
3		Kick off Meeting	1 day	Mon 1/7/19	Mon 1/7/19	2	Melissa Gfelle	
4		Meet with stakeholders for expectations	1 day	Tue 1/8/19	Tue 1/8/19	3	Melissa Gfeller	
5		Gather team members	7 days	Wed 1/9/19	Thu 1/17/19	4	Melissa Gfeller	
6		Aquire paper surveys from DNR for Conversion to Survey123	5 days	Fri 1/18/19	Thu 1/24/19	5	Melissa Gfeller	
7		Team Meeting	1 day	Fri 1/25/19	Fri 1/25/19	6	Jimmy Smith,	
8		Digitize Template for Survey	25 days	Mon 1/28/19	Fri 3/1/19	7	Jimmy Smith, Sarah Jones	
9		Stakeholder progress report	1 day	Mon 2/18/19	Mon 2/18/19		Melissa Gfeller	
10		Survey contains required features	2 days	Mon 3/4/19	Tue 3/5/19	8	Jimmy Smith, Sarah Jones,	

NTT CHART



Reference:
Gantt Chart

Cost Management

	# Units/Hrs.	Cost/Unit/Hr.	Subtotals	Benefits	WBS Level	% of Total
WBS Items						
1. Project Management				**30%**	**$164,117**	**24%**
1.1 Project manager	1320	$34	$44,563	$13,369		
1.2 Project team members(x2)	848	$47	$40,000	$12,000		
1.3 Project team member (Database Designer)	352	$36	$12,714	$3,814		
Contractors (10% of software development and testing)			$37,656			
2. Hardware					**$7,200**	**1%**
2.1 Handheld devices (Tablets)	40	$80	$3,200			
2.2 Servers	1	$4,000	$4,000			
3. Software					**$360,036**	**52%**
3.1 Licensed software (ArcGIS Enterprise)	100	$200	$20,000			
3.2 Microsoft Workflow (Monthly Cost)	12	$15	$180			
3.2 Software development*			$339,856			
4. Testing (10% of total hardware and software costs)			$36,706		**$36,706**	**5%**
5. Training and Support					**$3,490**	**1%**
5.1 Trainee cost	40	$50	$2,000			
5.2 Travel cost	10	$5	$50			
5.3 Project team members (Train DNR)	40	$36	$1,440			
6. Reserves (20% of total estimate)			$114,310		**$114,310**	**17%**
Total project cost estimate					**$685,858**	

Reference:
Cost Estimate, Project Management Budget

Risk Management

- Expensive transition from paper to digital
- The project will not be beneficial in the future
- To difficult to maintain the database and related features
- The mobile application will be too challenging to use
- The other DNR regions will not want to transition to digital

Reference:
Risk Management Plan, List of Risks

Stakeholder Management

Stakeholders:

Jake Mecham: Utah Department of Natural Resources

Steve Burns: Director of the Utah's Hogle Zoo

Janice Gardner: Wild Utah Project

Name	Position	Internal/External	Project Role
Jake Mecham	Utah Department of Natural Resources Employee	Internal	Sponsor
Steve Burns	Director Utah's Hogle Zoo	Internal	Sponsor
Janice Gardner	Wild Utah Project	Internal	Sponsor
Melissa Gfeller	Project Manager	Internal	Project Manager
Kayleigh Mullen	Citizen Scientist Wildlife Biologist Utah's Hogle Zoo	Internal	Advisor

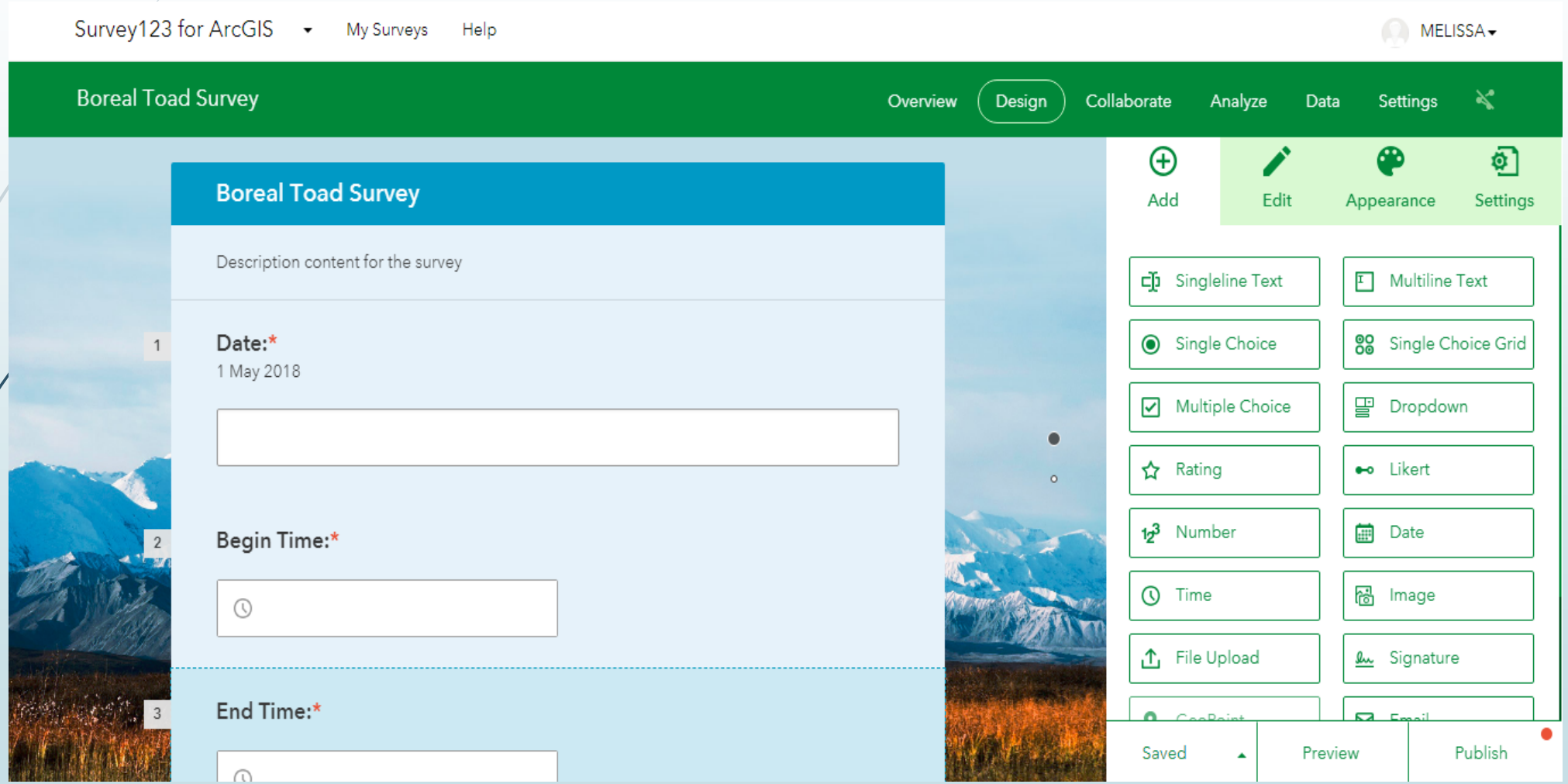
Reference:

Stakeholder Management Strategy, Stakeholder Register

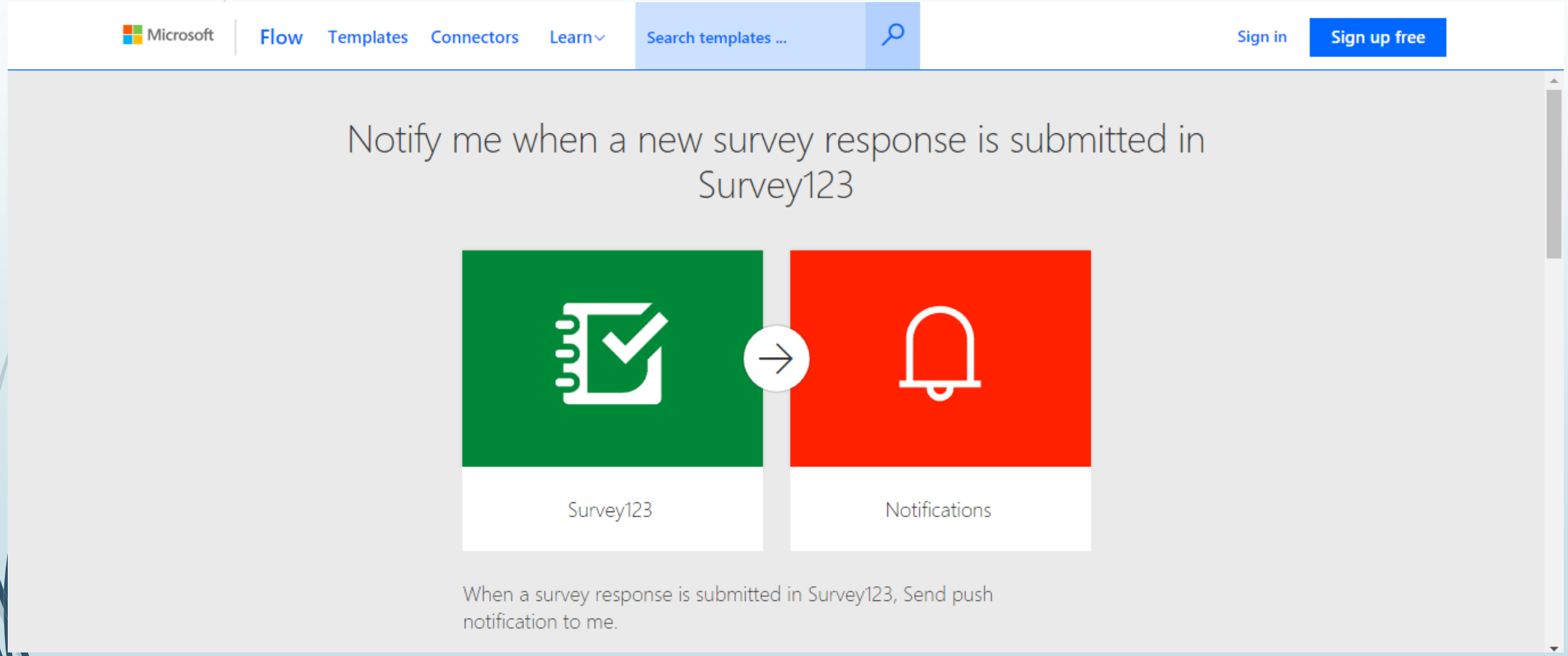
Human Resources

- Internal
  - Manage the team in charge of project development
- External
  - There will be at least two testing phases to unsure the DNR personnel are properly trained to use the product
  - Testing phases
    - 1. DNR employee training
    - 2. Volunteer/Citizen Scientists training
  - The training will allow these test groups to give feedback on the product

Survey123


Survey123 for ArcGIS
My Surveys
Help
MELISSA
Boreal Toad Survey
Overview
Design
Collaborate
Analyze
Data
Settings
Boreal Toad Survey
Description content for the survey
1
Date:*
1 May 2018
2
Begin Time:*
3
End Time:*
Add
Edit
Appearance
Settings
Singleline Text
Multiline Text
Single Choice
Single Choice Grid
Multiple Choice
Dropdown
Rating
Likert
Number
Date
Time
Image
File Upload
Signature
Saved
Preview
Publish

Microsoft Workflow



Questions