Citizen Scientist

Who are secondary stakeholders?
-Sponsors of Cornell Lab of Ornithology
-Governments/policy makers

What do they gain by doing this? (benefit)
-Greater knowledge about birds
-A place to share interest in birding with others
-A way to contribute to research and policies that impact their local birds/environment

What expert knowledge/resources do they provide?
-Local information on birds
-Time to go birding
-Access to some private land

What data are they collecting? (cost)
-When, where, and how they went birding
-A checklist of birds seen and heard during outing

How are they collecting data?
-Fill out the information through an app, website
-Use the Merlin app to send limited information to eBird account

What sensitive data is needed?
-Name, email address (for proper attributions and notifications)
-GPS tracking for bird locations
-Sensitive species information

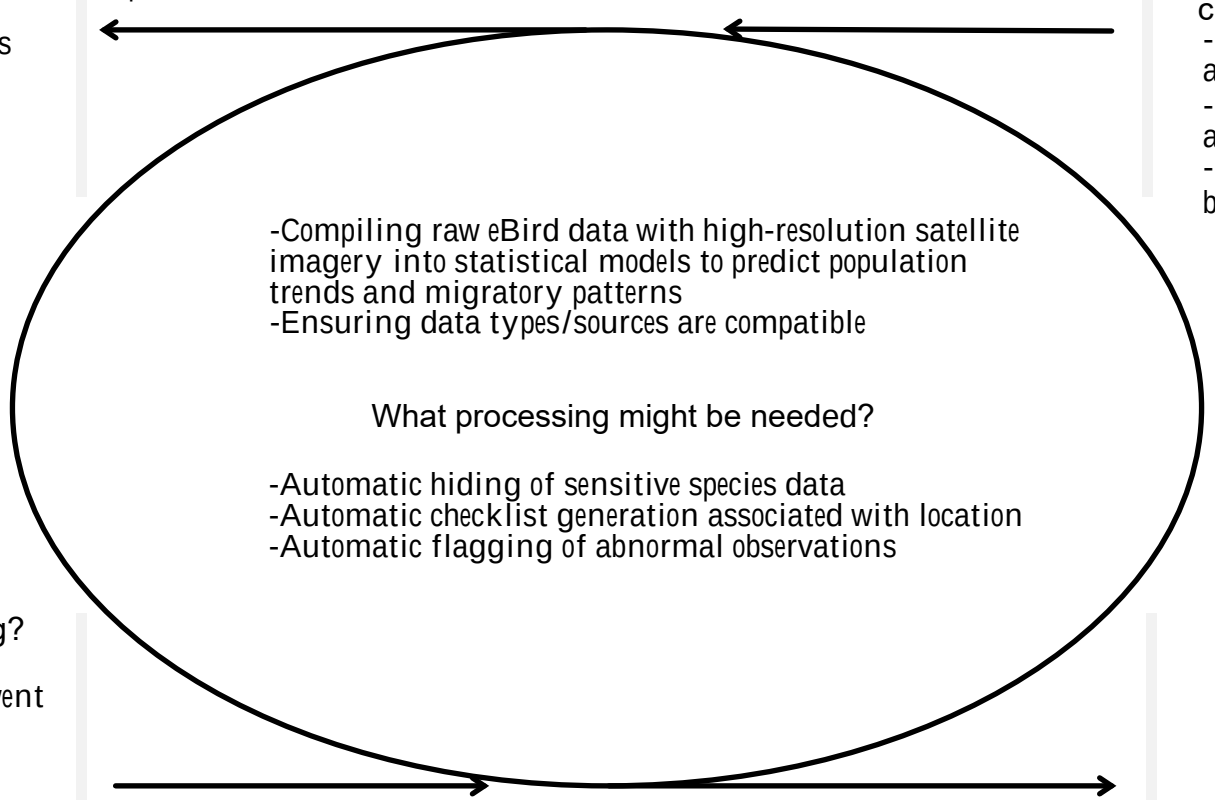
How do you make it accessible?
-Have a Help Centre/FAQs section
-The Merlin App allows you to track/identify by sound and sight
-Adjustable settings

Engaging?
-Regional collaboration teams
-Can see hotspots and other birder profiles

How should citizens access researcher knowledge?
-Through the website and apps
-News articles on the website
-Educational resources and seminars online
-Social Media

How do you ensure consent/ transparency of purpose?
-When citizen's sign up they fill out privacy preferences (with examples of how visibility looks)
-Media copyright pop up if birders upload sound/images
-links to privacy policies

What do they provide to citizens? (cost)
-Maintaining the website and apps
-Manually checking abnormal data
-Providing information on bird species



-Compiling raw eBird data with high-resolution satellite imagery into statistical models to predict population trends and migratory patterns
-Ensuring data types/sources are compatible

What processing might be needed?

-Automatic hiding of sensitive species data
-Automatic checklist generation associated with location
-Automatic flagging of abnormal observations

What could ensure data quality?
-Checklist Filters (Birders are presented with a list of likely birds for that date and region, developed by experts)
-Encourage thorough documentation to assist with double checking abnormal observations
-Have volunteer experts review abnormal observations

How should data be stored, archived, and accessed?
-Individual's records can be downloaded freely, but aggregated data is requested
-Data managed by Cornell

How is sensitive data kept?
-Personal data is never shared
-GPS locations are not made public
-Sensitive species information requires specific request
-Adjustable privacy options

What expert knowledge/resources do they provide?
-Statistical knowledge
-Information on bird species
-Secure places to store data

What data are they analysing? (benefit)
-Bird distributions, abundance, habitat use, and trends globally

What can be done with this analysis?
-Research/monitoring reports
-Species management
-Habitat protection
-Informing law/policy

What potential harm could happen?
-Poachers could attack sensitive species
-Bad actors could use GPS or other data to harm birders

Researchers

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