Landsat Product Elicitation Wireframes

The information will be hosted on a web site with controlled access. Users will be Emailed a link to this hosted web site. When they arrive they are registered as part of the URL and asked to click on as many of the options, represented as "check boxes", as are applicable to their needs. No free-form text responses will be requested or allowed. No personal identifiable information is being solicited or collected

Elicitation of Landsat Product Specifications
The USGS is formulating plans to harmonize specifications for the products being generated from the various Landsat instruments: multispectral scanner (MSS); thematic mapper (TM); enhanced thematic mapper plus (ETM+); and the operational land imager/thermal infrared sensor (OLI/TIRS). Towards this end, we are interested in understanding what levels of processing are most needed by the Landsat data user community.

Please check all of the desired characteristics that are required for your applications for each of the product types listed below:

Level-1 Products: digital numbers (DNs) representing scaled at-aperture radiances.
- o Systematic geometric correction
- o Precision geometric correction
- o Precision and terrain geometric correction (orthorectification)

- Pixel values as digital numbers (DNs) representing calibrated radiances
- Pixel values as digital numbers (DNs) representing top of atmosphere reflectance
- Pixel values as top of atmosphere reflectance
- Quality assessment band in which the presence of clouds are indicated on a per-pixel basis
- Quality assessment band in which the presence of cloud shadows are indicated on a per-pixel basis
- Quality assessment band in which the presence of cirrus (Landsat 8 only) is indicated on a per-pixel basis
- Quality assessment band in which the presence of snow/ice are indicated on a per-pixel basis
- Quality assessment band in which the presence of water is indicated on a per-pixel basis
- Geometric correction root mean square error (RMSE)
- Geometric verification root mean square error (RMSE)
- No preference
- Other (please specify)

Level-2 Products: geophysical parameters retrieved from Level-1 products.
- Atmospherically corrected surface reflectance
- Atmospherically corrected surface reflectance with terrain illumination adjustment
- Atmospherically corrected surface reflectance with bidirectional reflectance distribution function (BRDF) adjustment
- Atmospherically corrected surface reflectance with terrain illumination and bidirectional reflectance distribution function (BRDF) adjustment
- Thermal data corrected to brightness temperature
- Thermal data atmospherically corrected to apparent surface temperature
- Thermal data atmospherically corrected and emissivity adjusted to actual surface temperature
- Quality assessment band – aerosol optical thickness (aerosol optical depth)
- Quality assessment band – pixels flagged for solar illumination adjustment
- Quality assessment band – pixels flagged as distance from clouds

Analysis Type
- Single scene
- Multi-scene mosaic
- Multi-date cloud-reduced composite
- Multi-date change analysis
- Time series analysis

Applications Areas - (This would be a pull-down list from which they could select primary and secondary applications per the US Group on Earth Observations (USGEO) Societal Benefit Areas)

- Primary application
  - Agriculture and Forestry
  - Biodiversity
  - Climate
  - Disasters
  - Ecosystems (Terrestrial and Freshwater)
  - Energy and Earth Resources
  - Human Health
  - Ocean and Coastal Resources and Ecosystems
  - Space Weather
  - Transportation
  - Terrestrial Reference Measurement
  - Water Resources
  - Weather
- Secondary application
  - Agriculture and Forestry
  - Biodiversity
  - Climate
  - Disasters
  - Ecosystems (Terrestrial and Freshwater)
  - Energy and Earth Resources
  - Human Health
  - Ocean and Coastal Resources and Ecosystems
  - Space Weather
  - Transportation
  - Terrestrial Reference Measurement
  - Water Resources
  - Weather