

# Processing Workflow

## Overview

### Inputs

Nationwide ALS point cloud  
~ 49k tiles

Nationwide terrain model at 0.4 m res.  
~ 49k tiles

#### **process\_tiles.py** Process management

- Parallel processing (per tile)
- Point cloud extractions
- DTM extractions
- Logging

### Outputs

Ecological variables, raster 10 m res.  
18 x terrain and cover structure descriptors  
~ 49k tiles each

### dk\_lidar Python Modules

#### **points.py**

Point cloud handling and extraction functions

- Point cloud ingestion
- Footprint extraction
- Descriptor extractions

OPALS bindings in Python.

#### **dtm.py**

DTM handling and extraction functions

- Footprint extraction
- Aggregations
- Descriptor extractions

GDAL and SAGA GIS binaries.

#### **common.py**

Common Functions

- Logging functions
- Mask generation

#### **settings.py**

Global settings

- Processing options
- Input/output paths
- Paths to binaries

### Helper scripts

Independent python scripts

#### **progress\_monitor.py**

Process monitoring

- Displays progress
- Estimates time remaining

#### **debug.py**

Debugging script

- Executes processing functions (points & dtm) for a single tile.
- Complemented by **debug.rmd** used for quality assurance.