

# Web Processing - Standardized GIS Analyses for Cable Route Planning

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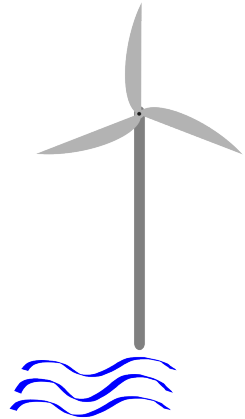
# Topic and Motivation

## Topic

- ▶ route planning, e.g. connection of offshore wind farms to the power grid
- ▶ conflicts with land usage, land coverage, regulation
- ▶ routing cables from landing point to final position
- ▶ offer a standard web service for the routing

## Motivation

- ▶ Energy Security
- ▶ Contribution to important real world problems



# Method and Research Issue

## Method

- ▶ Least cost path (LCP)
  1. input: Destination and Cost Raster
  2. Aggregated Cost and Backlink → Route
- ▶ Web Processing Service (WPS)
  - ▶ standardized GIS<sup>1</sup> web service
  - ▶ processing spatial data (Raster and Vector)

## Research Issue

- ▶ optimization of rasterization
- ▶ reduce area of high resolution raster

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<sup>1</sup>Geographic information system

# Timetable

| Start Date | End Date   |                                      |
|------------|------------|--------------------------------------|
| 09/23/2022 |            | Project Start                        |
| 09/23/2022 | 10/10/2022 | Initial Literature Study             |
| 10/01/2022 | 10/23/2022 | Initial Data Search                  |
| 10/14/2022 |            | Kick-Off Presentation                |
| 10/16/2022 | 10/28/2022 | Data Conversion/Costs/test execution |
| 10/28/2022 | 12/31/2022 | provide WPS/implement LCP            |
| 12/14/2022 |            | Midterm Presentation                 |
| 12/14/2022 | 02/01/2022 | Optimization/Research Issue          |
| 02/01/2022 |            | Feature Freeze                       |
| 02/01/2022 | 02/28/2023 | Finalizing Report                    |
| 02/28/2023 |            | Submission                           |
| 03/15/2023 |            | Final Presentation                   |