



2 Urban TEP data processor hosting service

Urban TEP provides several processing centres with pre-installed data processors and user-provided data processors. Urban TEP offers to host data processors and processing chains provided by a customer (service provider, data provider, research project, etc.) in a processing centre. The data processor should be related to the urban domain. It may use Sentinel or other EO input data or Urban TEP datasets as input. The processor can be used on-demand or for the generation of a larger output dataset, or for systematic daily processing. Moreover, it can be private or public.

Urban TEP processing centres provide a wide range of computing infrastructures including cloud environment, High-Performance Computing (HPC) clusters and AI-specialized NVIDIA DGX-2 machine. Processor optimization for the high-performance requirements is available as an optional service.

2.1 On-demand processing service

The on-demand processing service offers the processing on-request. Whenever something shall be processed the customer specifies input collection, temporal and spatial extent, the processor to be applied, and its parameters. After processing, the customer can access the result dataset.

2.1.1 Service of Urban-TEP

For on-demand processing Urban TEP

- Provides the processing service available on a request basis. Whenever a request arrives, the result will be produced and delivered. The result will be stored for download but not long-term archived. The service is planned to be available 24h a day. The service is maintained during office hours. A certain set of resources are available for the service whenever it is used, ensuring a certain performance. Details can be negotiated according to the customer's demand.
- Provides access to Sentinel input data, other EO datasets, and Urban-TEP data portfolio (e.g. WSF - <https://urban-tep.eu/#/>) for the processor in the respective data centre.
- Provides a budget of monthly processing resources included in the offer. Within this budget, requests can be submitted by the customer without additional costs. Exceeding resources will be offered if required.
- Urban TEP helpdesk is available for processing issues.
- Setup of the service with analysis of the integration requirements, provision of a system user account for the customer, provision of a suitable example processor software package, provision of interfaces for processor package upload and for machine-to-machine request submission, support during processor integration and external interface integration

2.1.2 Activities of the customer

Activities of the customer comprise

- Identification of the service to be provided, its parameterisation
- Definition and local testing of the data processor with single input products.
- Upload and integration of the processor as processor software package in a processing centre, testing of the integrated processor in the processing centre.
- Integration of a machine-to-machine interface offered by Urban TEP into the customer's own system (if applicable)





2.1.3 Price

For a basic use case without additional services (no optimisation of the processor etc.) the monthly rate for the on-demand processing service is

€ 2,500.- per month

for a 12-months subscription.

This includes

- availability of the service described above
- access to the input data
- up to 2000 processing requests per month
- computing in the volume of up to 1000 core hours, 8 GB RAM per product
- 6 support cases per year

The monthly rate can be adjusted for new contracts if the DIAS platform used changes their infrastructure prices.

2.1.4 Options

Optional services by Urban-TEP are

- Algorithm development
- Processor optimization for High-Performance Computing (HPC) environment
- Support during processor testing on the platform
- Output dataset hosting, integration of the output dataset as layers into VISAT
- Systematic processing as data-driven service to process new data every day
- Bulk processing of large datasets and provision of the processing result
- Training and workshop for processor integration

These activities can be requested in addition to the on-demand processing service.

