To discover new space debris objects and to determine and maintain their orbits, optical, radar, and Satellite Laser Ranging (SLR) observations are used. Using SLR measurements for improving orbits of defunct satellites are being explored to support satellite operations. Expert Centre provides expert support to determine the readiness of a certain sensor in terms of space debris observation capability following qualification procedures.

Operational Functions
- Coordinate the sensors for tracking and surveillance tasks
- Qualify external data sources
- Service Level Agreement

Support Functions
- Calibration of sensors
- Evaluation of observation and processing techniques
- Data quality control

Optical & SLR Expert Centre
- Efficiently task several external optical sensors and SLR Stations.
- Combines expertise in the field of observation techniques (optical passive and SLR) and maintains an overview on the sensors availabilities and capabilities
- Support standardisation

External (SLR) Sensors

Data for Qualification
- Qualification analysis of data: SLR and optical
- Support standardisation

Calibrated data
- General status of External Sensors

Coordinated Data & Tasking Centre

General status
- Data for Qualification
- Calibrated data

1st Results from Borowiec SLR station validated and qualified by Expert Centre:

<table>
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<tr>
<th>Target</th>
<th>Date</th>
<th>Mean [m] (full rate data)</th>
<th>Standard-deviation [m] (full rate data)</th>
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<tr>
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</table>

ESA is interested in SLR to (uncooperative) objects. Present and future work regarding Expert Centre includes support to technology development beyond the SSA needs, such as support for determination of attitude and attitude motion, can be supported through the Expert Centre.