

# RPW Consortium #24

## Operations : Plan for the Cruise Phase



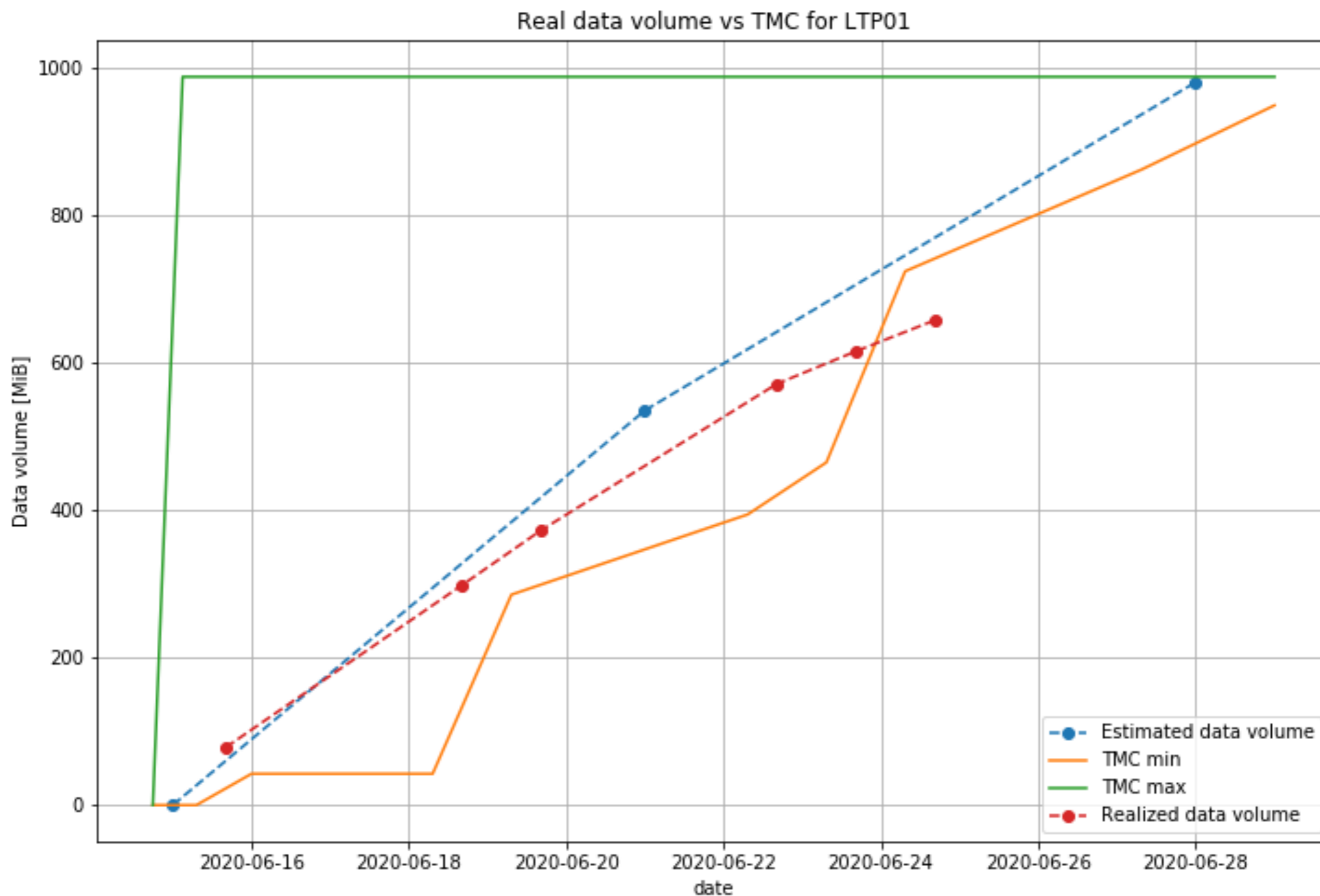
**solar orbiter**



# How operations are prepared ?

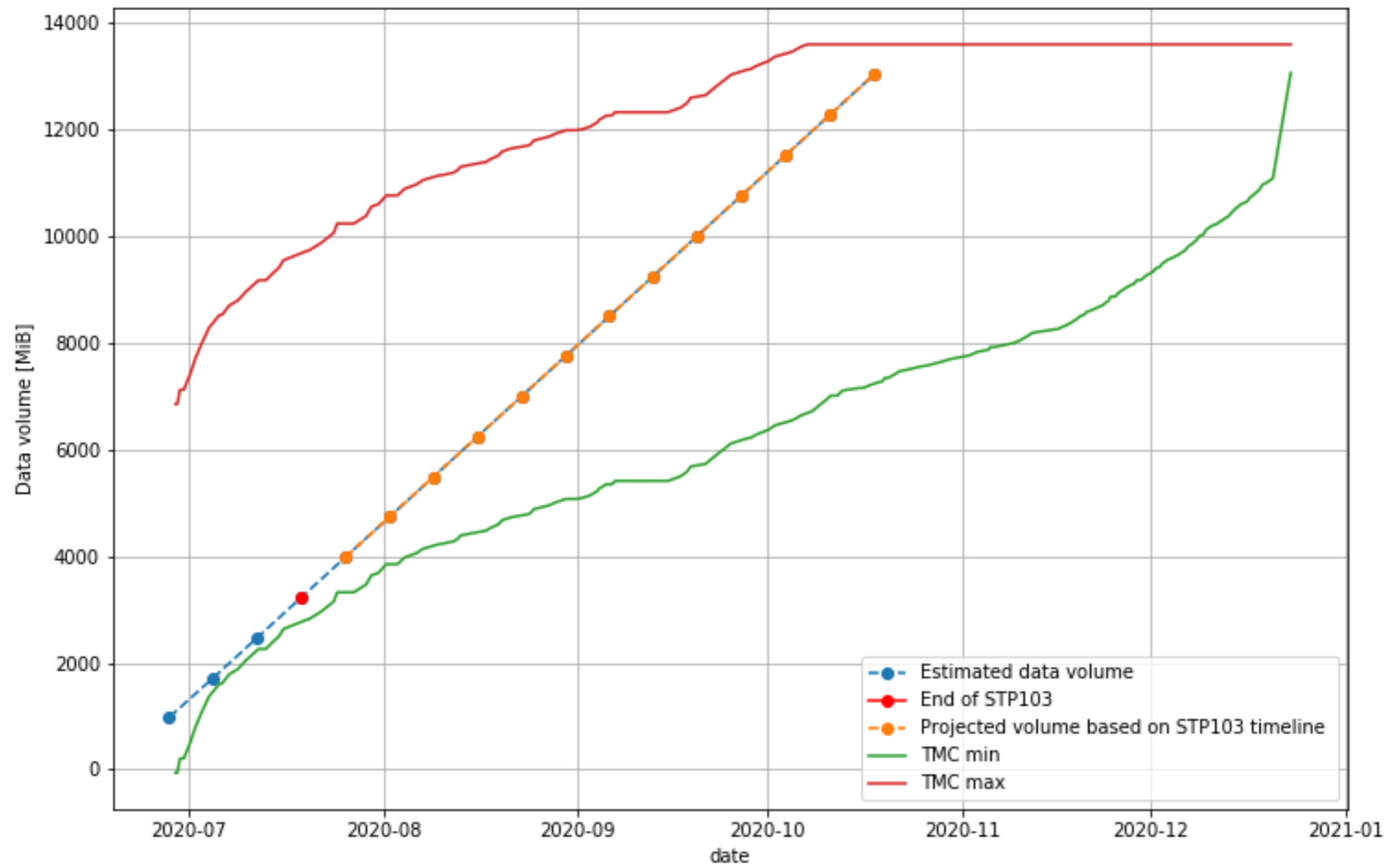
- Format : 7 daily IOR describing one week (STP) (xml file) with sequences, absolute times of execution, values of formal parameters. The IOR are created using FAUST tool, developed by S. Lion from ROC team.
- Schedule : to be sent to SOC two weeks prior execution via GFTS server : deadlines given in <https://issues.cosmos.esa.int/solarorbiterwiki/display/SOSP/LTP02+Schedule>
- Constraints : Telemetry Corridor (TMC) determined by SOC + IS coordinated burst windows times.
- How does it works in practice :
  - During ROB telecon on Friday, TMC is presented and ROB decides how to use at best the allowed telemetry
  - Preparation and sending IOR to SOC on wednesday two weeks prior execution
  - Saving of the full timeline in csv on [https://rpw.lesia.obspm.fr/roc/data/private/solo/rpw/data/Timeline\\_apriori\\_csv/2020/](https://rpw.lesia.obspm.fr/roc/data/private/solo/rpw/data/Timeline_apriori_csv/2020/) → ROC is working on a new tool more user friendly to visualize what is planned and what is played for real.

# Telemetry study for LTP01



# Telemetry perspective for LTP02

Real data volume vs TMC for LTP02



# Compression efficiency

Compression algorithm very efficient for LFR products but not for TDS  
 —> tuning of compression rate to better estimate data rate.

| Packet type            | Eng values |        |        |        | Selected compression rate for ISM calculations |
|------------------------|------------|--------|--------|--------|--|
|                        | Apr-21     | May-30 | Jun-01 | Apr-26 |  |
| LFR Normal CWF F3      | 4,2        | 0,0    | 0,0    | 4,1    | 4  |
| LFR Normal CWF Long F3 | 4,1        | 5,1    | 5,2    | 3,5    |  |
| LFR Burst CWF F2       | 3,4        | 0,0    | 0,0    | 3,5    | 3.5  |
| LFR Normal CWF F0      | 2,9        | 2,9    | 2,9    | 3,0    | 2,9  |
| LFR Normal CWF F1      | 3,0        | 3,1    | 3,0    | 3,0    | 3  |
| LFR Normal CWF F2      | 3,4        | 3,4    | 3,5    | 3,5    | 3,4  |
| LFR SBM1 CWF F1        | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| LFR SBM2 CWF F2        | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| TDS Normal RSWF        | 1,7        | 1,4    | 1,4    | 1,6    | 1,5  |
| TDS Normal TSWF        | 1,7        | 1,5    | 1,4    | 1,6    | 1,5  |
| TDS SBM1 RSWF          | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| TDS SBM2 TSWF          | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| TDS BACKUP RSWF        | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| TDS BACKUP CWF         | 0,0        | 0,0    | 0,0    | 0,0    | 2  |
| TDS MAMP               | 4,0        | 0,0    | 0,0    | 3,9    | 4  |
| Global average         | 2,8        | 3,1    | 3,1    | 2,9    |  |