

In-country C&I Test Lab

To encourage SADC Member States to establish their own National C&I Test Laboratories. The ITU can provide the necessary Technical Assistance upon request from Member States.

Africa is the only region without any accreditation scheme similar to ILAC and the implementation of a Mutual Recognition Agreement (MRA) may take time. A possible approach would be to start deploying In-Country (national) C&I Test Labs in SADC Member States in order to build capacity and know how in the area of instrumentation, lab management, quality and instrumentation purchasing process (quality and instrumentation maintenance). This may lead to Member States developing these National C&I Test Labs becoming references for their respective technology (domain) testing area in the SADC Region.

Tables A and B may be used as a guide for the selection of the technology (domain) testing area for the National C&I Labs. Table A provides indicative office floor requirements and cost factors. Table B provides an indicative ranking by ITU Experts on the relevance of the technology testing area, taking into account the cost aspect.

| lab | activity | m ² | Location Rent K€/year | Utility K€/year | Instrument. Asset K€ | Personnel Number of people # | Instrument. Opex K€/year |
|------------|---|----------------|-----------------------------|--------------------|----------------------------|---------------------------------------|--------------------------------|
| SAR | Specific Absorption Rate lab | 150 | 19 | 28 | 800 | 4 | 25 |
| USX | User experience lab | 130 | 17 | 24 | 100 | 6 | 0 |
| BBA | Broadband access lab | 300 | 39 | 56 | 1,400 | 7 | 5 |
| VAS | Mobile value added services lab | 40 | 5 | 7 | 0 | 3 | 0 |
| EPS | Electrical safety & protection lab | 80 | 10 | 15 | 1,200 | 4 | 25 |
| ELA | Electroacoustic lab | 250 | 32 | 46 | 800 | 4 | 5 |
| EMC | Electromagnetic compatibility lab | 300 | 39 | 56 | 1,600 | 5 | 5 |
| RSL | Radio & Signalling lab | 250 | 32 | 46 | 2,000 | 12 | 10 |
| PWR | Powering consumption lab | 80 | 10 | 15 | 200 | 2 | 5 |
| QML | Quality of material lab | 250 | 32 | 46 | 1,300 | 6 | 15 |
| WIF | Personal area network lab | 170 | 22 | 31 | 500 | 5 | 5 |
| TPF | Fixed Test plant | 900 | 117 | 167 | 3,000 | 33 | 120 |
| TPM | Mobile Test plant | 2500 | 324 | 463 | 3,000 | 55 | 300 |
| DTT | Digital terrestrial (DVB -T2) | 40 | 50 | 50 | 150 | 2 | 20 |

| LAB | activity | Rationale | Usefulness | cost |
|-----|------------------------------------|--|------------|------|
| DTT | Digital terrestrial | to verify the quality of set top box | 10 | 10 |
| SAR | SAR | to verify the quality of mobile terminals for health reasons | 12 | 6 |
| PWR | Powering consumption lab | critical powering conditions either for main supply conditions and quality of equipment | 8 | 9 |
| QML | Quality of material lab | to verify the quality of equipment in severe environmental conditions (temperature humidity, fog salt) | 5 | 11 |
| WIF | Personal area network lab | Important to verify WIFI very common in SADC | 6 | 8 |
| EPS | Electrical safety & protection lab | critical powering conditions either for main supply conditions and quality of equipment | 9 | 5 |
| EMC | Electromagnetic compatibility lab | to verify the emitted and conducted radiations in low quality equipment | 10 | 3 |
| RSL | Radio & Signalling lab | to verify the quality of radio part of mobile terminals in low quality mobile equipment | 11 | 2 |
| VAS | Mobile value added services lab | Not useful in SADC | 0 | 12 |
| ELA | Electroacoustic lab | To verify audio quality in mobile terminals | 4 | 7 |
| USX | User experience lab | Not useful in SADC | 0 | 10 |
| BBA | Broadband access lab | to verify the quality of broadband lines in emerging fixed market | 5 | 4 |
| TPF | Fixed Test plant | Too complex and expensive, useful only for big test center | 0 | 1 |
| TPM | Mobile Test plant | Too complex and expensive, useful only for big test center | 0 | 1 |
| | | | 10 | 10 |