WMO Guide to Free and Open Source Software

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# Introduction

* digital transformation via FOSS

## Audience

* decision makers
* developers

## Scope

Living document

## Background

* use notes from TT-OSS document to INFCOM Management Group
* strong usage, increasing usage
* WIS 2.0 as an example of FOSS dev during standards dev
* needs coordination

## Data policy considerations

Enabling Unified Data Policy via software

# Guidelines

## WMO Members

### Using FOSS

* FOSS as an option during software evaluation
* risk, hidden costs
* principles apply to ANY software
* risk management
* due diligence (maintenance, updates)
* lifecycle management/EOL → migration
* total cost of ownership considerations
  + HR profile / IT capacity of organization
* benefits (freedom, cost, reducing vendor lock in, portability)
* infrastructure considerations

### Contributing to FOSS

* national policies
* events/hackathons (eg. OGC/OSGeo/ASF Joint Sprints)
  + by product: connection/collab
* regulations / risk / constraints / considerations

### Managing FOSS activities

* aligning with WMO standards
  + achieving compliance

## WMO Activities

### Coordination, alignment and support

* coordination/support functions
* software selection for WMO application development
* managing FOSS activities
* Aligning with WMO ecosystem of activities
* ensuring sustainability of FOSS usage
* managing risk
* functions
* people

### Standards compliance

* compatability / compliance matrix
* Open Standards <→ FOSS support matrix
* implementation of WMO Tech Regs / compliance ?
* FOSS as an early indicator of Tech Regs feasibility
  + ensure FOSS implementations are part of Technical Regulation development/assessment (feasibility)
  + example: wis2box, developed at the same time as WIS2 standards
  + example: OGC standards (3 implementations)
  + FOSS is not part of the Tech Reg, but is an indicator of maturity/capability

### Software review and evaluation

* software identification and selection
  + project checklist/assessment
* "approved projects" and/or Reference Implementations
  + make Tech Regs more concrete
  + Tech Regs → FOSS implementations
  + should FOSS be cited in WMO Tech Regs (suggest no)
  + criteria needed
    - compliance (data exchange)
    - software evaluation (FOSS!) checklist → confidence
    - readiness
    - bus factor
  + rolling review
* harmonization: regular review of ecosystem to ensure alignment and optimal use of resources

### Application development

* case study: wis2box et. al.
  + agile development during Tech Reg development

# References

1. <https://community.wmo.int/governance/commission-membership/commission-observation-infrastructures-and-information-systems-infcom/commission-infrastructure-officers/infcom-management-group/standing-committee-information-management-and-technology-sc-imt> [↑](#footnote-ref-21)
2. <https://community.wmo.int/governance/commission-membership/infcom> [↑](#footnote-ref-23)