



ES Software License Management Process Document

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Amendment Record

Rev. No.	Paragraph(s) Affected/ Type of Amendment*	Description/Reason for Amendment*
2	Updated section 2	Removal of Permissive and Copyleft license type from blanket approval.
2	Updated section 3, 6.1 and 6.2	To modify SO do not need to digitally sign. Just indicate supporting the request. Digitally signed document cannot be amended as long as one party has signed. This change is to allow AO to provide remarks before approving and signing.
2	Added section 9	To insert a process for software license evaluation
2	Updated Annex A	Removal of Permissive and Copyleft license type from blanket approval.

* : There are 3 types of amendment: Insertion(I), Deletion(D) and Modification(M)

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1. OBJECTIVE

The purpose of the document is to establish the software license management processes to govern the use of software in ES division. The processes address the following:

- i. Approval of use of Software in Project Computers (Software Approval Process)
- ii. Installation of Software in Project Computers (Software Installation Process)
- iii. Tracking of installed Software (Software Tracking Process)
- iv. Approval of transfer of installed Software (Software Transfer Process)
- v. Removal of installed software (Software Removal Process)
- vi. Audit of installed software in Project Computers

2. Software License Management Process

The Software License Management Process covers the management of the software license lifecycle after its acquisition by the Project Team. These processes include the software approval, installation, tracking, transfer, removal and auditing.

The following table shows the applicability of the various software license management processes across the different type of software licenses.

Type of Software Licenses	Management of SW License Processes					
	Software Approval	Software Installation	Software Tracking	Software Transfer	Software Removal	Audit of Software
PDL, LGPL	Applicable*	Applicable	No	No	No	Applicable
Permissive, Copyleft	Applicable	Applicable	Applicable	No	No	Applicable
Non-Commercial, Proprietary	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

* The same software only needs to seek approval once (blanket approval). (See Annex A)

3. Software Approval Process

Step	Process	Stakeholder
1	Requesting Officer (RO) to fill in the Software License Usage Approval Form*.	Custodian of Project Computer that the software is installed
2	Supporting Officer (SO) to check and verify the validity of the request and to indicate supporting the request.	Core Programme SA
3	Approving Officer (AO) to approve by digitally signing the form.	Appointment holder (LD, PD, Director, Senior Director)
4	RO to forward the approved form to Core Programme SA.	RO, Core Programme SA
5	Core Programme SA to archive the approved form.	Core Programme SA
6	Core Programme SA to forward the approved form to ES Division SA.	Core Programme SA, Division SA

*See Annex C

Notes:

- i. Approval form will be in softcopy. (see Annex C for template)
- ii. Approval form will be signed with digital signature.
- iii. Approval form will be kept by the Core Programme SA in their respective core program folder (for audit purposes).
- iv. Process is applicable to all software license type.

4. Software Installation Process

Step	Process	Stakeholder
1	PC custodian/User to pass the software to the Core Programme SA. The Core Programme SA will be responsible to install the new Software.	Custodian/User of Project Computer, Core Programme SA
2	PC custodian/User to activate the software license. Core Programme SA to assist where necessary.	Custodian/User of Project Computer, Core Programme SA
3	Core Programme SA to update the tracking list according to the Software Tracking Process.	Core Programme SA

5. Software Tracking Process

Step	Process	Stakeholder
1	Core Programme SA will be responsible to track all the software using a softcopy tracking list.	Core Programme SA
2	Core Programme to update the Tracking List as and when needed.	Core Programme SA
3	Core Programme to keep the Tracking List in the respective core programme folder	Core Programme SA

Notes:

- i. See Annex F for Tracking List template
- ii. Examples of information to be tracked:
 - a. Type of software license
 - b. Project Computer that the software is installed in
 - c. User/Custodian the software license is assigned to
 - d. Software license validity period
- iii. Process is applicable to Permissive, Copyleft, Non-Commercial and Proprietary license type

6. Software Transfer Process

6.1 Transfer Within Same Core Programme

Step	Process	Stakeholder
1	Requesting Officer (RO) to fill in the software license transfer approval form*.	Custodian of Project Computer that the software is installed.
2	Supporting Officer (SO) to check and verify the validity of the request and to indicate supporting the request.	Core Programme SA
3	Supporting Officer (SO) to ensure the software is removed from the RO Project Computer according to the Software Removal Process.	Core Programme SA
4	Core Programme SA to ensure the software is installed on the Receiving Officer Project Computer according to the Software Installation Process	Core Programme SA
5	Core Programme SA to update the tracking list according to the Software Tracking Process.	Core Programme SA

*See Annex D

6.2 Transfer Between Two Core Programmes

Transferring Side

Step	Process	Stakeholder
1	RO to fill in the software license transfer approval form*.	Custodian of Project Computer that the software is installed
2	SO to check and verify the validity of the request and to indicate supporting the request.	Core Programme SA
2	SO to ensure the software is removed from the RO Project Computer according to the Software Removal Process.	Core Programme SA
3	Core Programme SA to update the tracking list according to the Software Tracking Process.	Core Programme SA
4	AO to approve and digitally sign the form.	Appointment holder (LD, PD, Director, Senior Director)

*See Annex D

Receiving Side

Step	Process	Stakeholder
1	RO to perform the acceptance of software transfer and digitally sign the software license transfer approval form.	Custodian of Project Computer that the software is installed
2	RO to seek approval for use of software according to the Software Approval Process	Custodian of Project Computer that the software is installed

3	Core Programme SA to ensure the software is installed on the Project Computer according to the Software Installation Process	Core Programme SA
4	Core Programme SA to update the tracking list according to the Software Tracking Process.	Core Programme SA

Notes:

- i. Transfer form will be in softcopy. (see Annex D for template)
- ii. Transfer form will be signed with digital signature.
- iii. Transfer form will be kept by the Core Programme SA in their respective core program folder (for audit purposes).
- iv. Process is applicable to Non-Commercial and Proprietary license type.
- v. If the software is registered in MMS with an inventory number and the assignee of the software is different after the transfer process, MMS will need to be updated as per DSO Inventory Management Procedure.

7. Software Removal Process

Step	Process	Stakeholder
1	RO to fill in the software license removal form*.	Custodian of Project Computer that the software is installed
2	SO to check and verify the validity of the request and digitally sign the form.	Core Programme SA
3	Core Programme SA will be responsible to remove the software.	Core Programme SA
4	Core Programme SA to update the tracking list according to the Software Tracking Process.	Core Programme SA

*See Annex E

Notes:

- i. Removal form will be in softcopy. (see Annex E for template)
- ii. Removal form will be signed with digital signature.
- iii. Removal form will be kept by the Core Programme SA in their respective core program folder (for audit purposes).
- iv. Process is applicable to Non-Commercial and Proprietary license type.
- v. If the software is registered in MMS with an inventory number and the reason for removal is to write-off, the assignee of the software will need to update the MMS as per DSO Inventory Management Procedure.

8. Audit of Software**8.1 Journaling of activities carried out**

Core Programme SA(s) is required to capture the activities that were carried out while performing the Software License Management Process in a Logbook. The Core Programme SA(s) will need to sign off each of the activities that has been completed.

A sample of what to capture for the Logbook is provided in Annex G.

8.2 Monthly Software Audit

Monthly software audit check will be carried out by the Core Programme SA:

- i. To cover at least 20% of the total Project Computers
- ii. To be of ad hoc random check
- iii. To pay more attention on Project Computers whom user is administrator account

The monthly software audit results will be included in the SA Monthly PC Audit report to SD(ES).

9. Software License Evaluation

There are times where software licenses are downloaded and installed for evaluation of the software capability, its dependencies on other libraries or packages and to assess whether the software can help to fulfill project requirements.

For this specific purpose, the following process should be followed:

Step	Process	Stakeholder
1	Requesting officer (RO) to approach SA directly to help to install the software.	Custodian of Project Computer that the software is installed
2	SA to update log book accordingly (to include duration of software evaluation, default is 2 weeks, RO to seek PL/PI/PD support when extension is required)	Core Programme SA
3	Upon completion of software evaluation, if the decision is to use the software, to follow the ES SW License Management Process thereafter. Otherwise the SA to uninstall the software and update the log book accordingly	Core Programme SA

10. Annex A - Blanket approval for GPL, LGPL License Type

There will be a master list to keep track of all the previously approved software that is of GPL, LGPL license type. When a RO want to request for approval of use for a software, he can check on this list to see if the software has been previously approved. If yes, there is no need to request for approval again. However, the form will be archived for audit purposes.

Important: Take note of the terms of usage of the software stated in the master list. If the usage deviates from the one stated in the master list, an approval must be sought.

11. Annex B - Software License Types with examples

Three Important Steps before using a Software in DSO

1. Most important is to read the **Software license agreement, Software Terms and Conditions** and also the **Software End User License Agreement (EULA)**.
2. Typically, if there is a free-to-use edition and a paid edition of the software, DSO should be using the paid edition. The free-to-use version will come with terms and conditions that invalidate the use of that version in a company setting such as DSO.
3. When in doubt please consult DDO for clarification on the licensing before using the software.

PDL

- SQLite

LGPL

- 7zip
(You can use 7-Zip on any computer, including a computer in a commercial organization. You don't need to register or pay for 7-Zip.)

Permissive

- **Anaconda** Individual Edition
(BSD – Free, Terms and Conditions: It states that use by **individual** hobbyists, **students, universities, non-profit organizations**, or businesses with **less than 200 employees** is allowed, and **all other usage** is considered **commercial** and thus requires a business relationship with Anaconda.
- **ConEmu**
(BSD – Free)
- **OpenSSH**
(BSD – Free)
- **PuTTY**
(MIT – Free)

Copyleft

- **Notepad++**
(GPL - you can use it free, distribute it as long as you don't modify its source code.)
- **FFTW**
(GPL – Free to use. If the application using FFTW library is being distributed, the application must also adhere to GPL which means all the application's source code has to be made open source)

Non-Commercial

- **Terracopy**
Freemium – A basic edition is offered
- **Sketchup Make**
Free for non-commercial use
- **Spotify**
Terms and Conditions: Spotify is only for personal, non-commercial use.

Proprietary

- **MATLAB**
- **Lightningchart**
- **Microsoft Visual Studio**
 - For Individual (Free Community Edition) – Any individual developer can use Visual Studio Community to create their own free or paid apps.
 - For Organizations (Free Community Edition) - An unlimited number of users within an organization can use Visual Studio Community for the following scenarios: in a classroom learning environment, for academic research, or for contributing to open-source projects.
 - Paid License Use (Professional Edition)

12. Annex C - Software License Usage Approval Form Template

Software License Usage Approval Form

Section 1: Request for usage of software license (To be filled up by Requesting Officer (RO))

Name of RO:	Division / Programme:	Date of Request (DD/MM/YYYY):	Is License Transferred in from outside Core Programme: Yes / No*
Assignee of software:		Machine CAT number:	Machine Name:
Name of Software:		(e.g. software license number, specific terms of usage to highlight)	
Version Number:			
Software Inventory Number (if any) (Nil entry is required if none)			
Type of license: PDL / LGPL / Permissive / CopyLeft / Non-commercial / Proprietary*			
Licensing Scheme: (e.g. Standalone, Node-locked, Floating, Perpetual, Subscription)			
License Validity Period: (Nil entry is required if none)			
Remarks:			

**strike out whichever is not applicable*

Section 2: Verification of Request for usage of software license (To be filled up by Core Programme System Administrator (SA))

Name of SA:	Division / Programme:	Verification of Section 1 information completed? (Please state reason in remarks if No) Yes / No*	Request Supported? (Please state reason in remarks if No) Yes / No*
Software Tracking Required? (Required for Permissive, CopyLeft, Non-Commercial and Proprietary License) Yes / No*		Is Software already in Blanket Approval List? Yes / No*	
Additional Info on software license: (Nil entry is required if there is no additional info)		Remarks:	

**strike out whichever is not applicable*

Section 3: Approval of Request for usage of software license (To be filled up by Requesting Officer (RO), approved and signed by Approving Officer (AO))

Name of AO:	Division / Programme:	Request Approved? Yes / No*
Remarks:		
Signature: Date (DD/MM/YYYY):		

**strike out whichever is not applicable*

Appendix

Role of RO

1. RO is responsible to find out what license type the software belongs to. He is also to read carefully the accompanying Software license agreement, Software Terms and Conditions and Software End User License Agreement (EULA) to ensure the software it does not violate any of the terms of use. (especially those that falls into the “Free” category)
2. Typically, if there is a free-to-use edition and a paid edition of the software, DSO should be using the paid edition. The free-to-use version will come with terms and conditions that invalidate the use of that version in a company setting such as DSO.
3. When in doubt please consult **DDO** for clarification on the licensing before using the software.

Types of Software License

Free				Not Free	
Public Domain License	Lesser General Public License (LGPL)	Permissive	Copyleft	Non-Commercial	Proprietary
Totally Free Anyone is free to use and modify the software	Mostly Free You can link to open source libraries within your own software Resulting code can be licensed under any other type of license	Some Requirements Some requirements for the distribution or modification of the software	Some Restrictions Some restrictions to prevent commercialisation of the software	Restrictive For individual use and not for general commercial use	Most Restrictive Ineligible for copying, modifying or distribution unless a paid license is obtained

13. Annex D - Software License Transfer Approval Form Template

Software License Transfer Approval Form

Section 1: Request for transfer of software license (To be filled up by Requesting Officer (RO))

Name of RO:	Division / Programme:	Date of Request (DD/MM/YYYY):
Current Assignee of software:	Current Machine CAT number:	Current Machine Name:
New Assignee of software:	New Machine CAT number:	New Machine Name:
Name of Software:	<div>Additional Info on software license:</div> <div></div> <div>(e.g. software license number, specific terms of usage to highlight)</div>	
Version Number:		
Software Inventory Number (if any) (Nil entry is required if none)		
Type of license: PDL / LGPL / Permissive / CopyLeft / Non-commercial / Proprietary*		
Licensing Scheme: (e.g. Standalone, Node-locked, Floating, Perpetual, Subscription)		
License Validity Period:		
Remarks:		

**strike out whichever is not applicable*

Section 2: Verification of Request for transfer of software license (To be filled up by Supporting Officer (SO), which is the Core Programme System Administrator (SA))

Name of SA:	Division / Programme:	Verification of Section 1 information completed? Yes / No*	Request Supported? Yes / No*
Software uninstalled? Yes / No*		Tracking Sheet Updated? Yes / No*	Vendor Software Portal Updated? Yes / No*
Additional Info on software license: (Nil entry is required if there is no additional info)		Remarks:	

*strike out whichever is not applicable

Note: If any of the Yes/No is a No. Please justify in the Remarks row.

Section 3: Approval of Request for transfer of software license (To be filled up by Requesting Officer (RO) and signed by Approving Officer (AO))

Name of AO:	Division / Programme:	Request Approved? Yes / No*
Remarks:		
Signature: Date (DD/MM/YYYY):		

**strike out whichever is not applicable*

Section 4: Acceptance of Request for transfer of software license (To be filled up by Requesting Officer (RO) and signed by receiving side Requesting Officer (RO))

Name of receiving side RO:	Division / Programme:	
Signature:		
Date (DD/MM/YYYY):		

*Signing by Receiving side Requesting Officer (RO) indicated he/she has received the full software package

Note: If the software is registered in MMS with an inventory number and the assignee of the software is different after the transfer process, MMS will need to be updated as per DSO Inventory Management Procedure.

14. Annex E - Software License Removal Form Template

Software License Removal Form

Section 1: Request for removal of software license (To be filled up by Requesting Officer (RO))

Name of RO:	Division / Programme:	Date of Request (DD/MM/YYYY):	Reason for removal:
Assignee of software:		Machine CAT number:	Machine Name:
Name of Software:		(e.g. software license number, specific terms of usage to highlight)	
Version Number:			
Software Inventory Number (if any) (Nil entry is required if none)			
Type of license: PDL / LGPL / Permissive / CopyLeft / Non-commercial / Proprietary*			
Licensing Scheme: (e.g. Standalone, Node-locked, Floating, Perpetual, Subscription)			
License Validity Period: (Nil entry is required if none)			
Remarks:			

*strike out whichever is not applicable

Section 2: Verification of Request for software license removal (To be filled up by Supporting Officer (SO), which is the Core Programme System Administrator (SA))

Name of SA:	Division / Programme:	Verification of Section 1 information completed? Yes / No*	Request Supported? Yes / No*
Software uninstalled? Yes / No*		Tracking Sheet Updated? Yes / No*	
Additional Info on software license: (Nil entry is required if there is no additional info)		Remarks:	
Signature:			
Date:			

**strike out whichever is not applicable*

Note: 1) If any of the Yes / No is a No. Please justify in the Remarks row.

2) If the software is registered in MMS with an inventory number and the reason for removal is to write-off, the assignee of the software will need to update the MMS as per DSO Inventory Management Procedure

15. Annex F - Software Tracking List Template

(To be in Excel format)

[illegible]

16. Annex G – Example of a Logbook Entry

[illegible]