

# HOW TO DEAL WITH CHANGES IN PDF REGULATION FOR SYSTEM ENGINEERS

*- BECAUSE CHANGE HAPPENS -*



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THE  
**REUSE**  
COMPANY

# ABOUT THE REUSE COMPANY (TRC)



WHEN?

01 The company was established in 1999

As a spin-off of a University in Madrid



WHO?

02 System + Software Engineers

Smart combination between Company staff and R&D from Academia



WHERE?

03 Headquarters: Madrid (Spain)

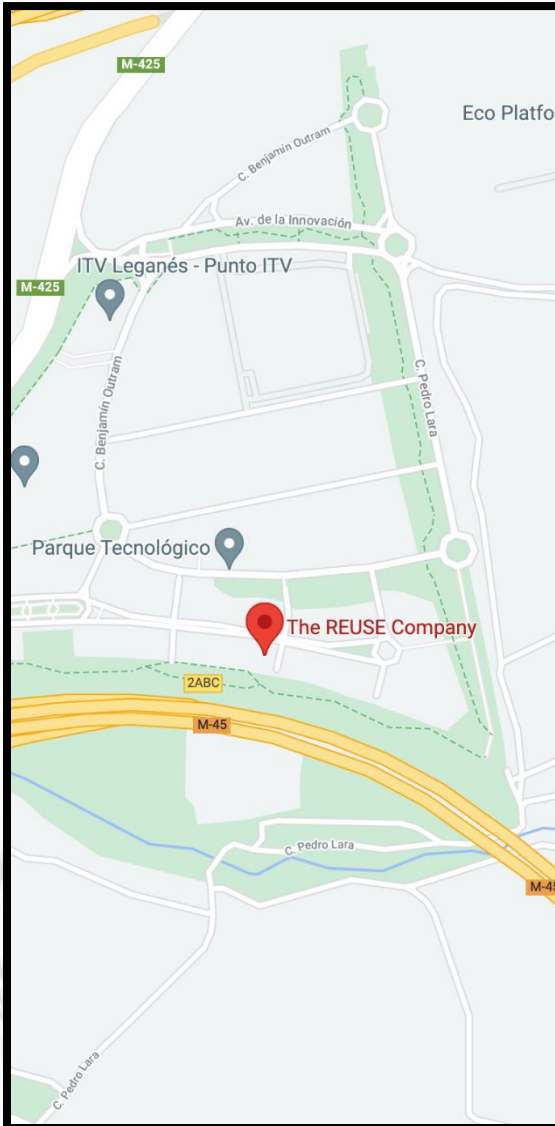
International offices:  
Boston (USA)  
Stockholm (Sweden)  
Tokyo (Japan) Delegation



WHY?

04 To promote a **reusable**, **scalable** and global solution to a **smart** and **interoperable** Systems Engineering environment, by offering a **semantic knowledge centric** approach.

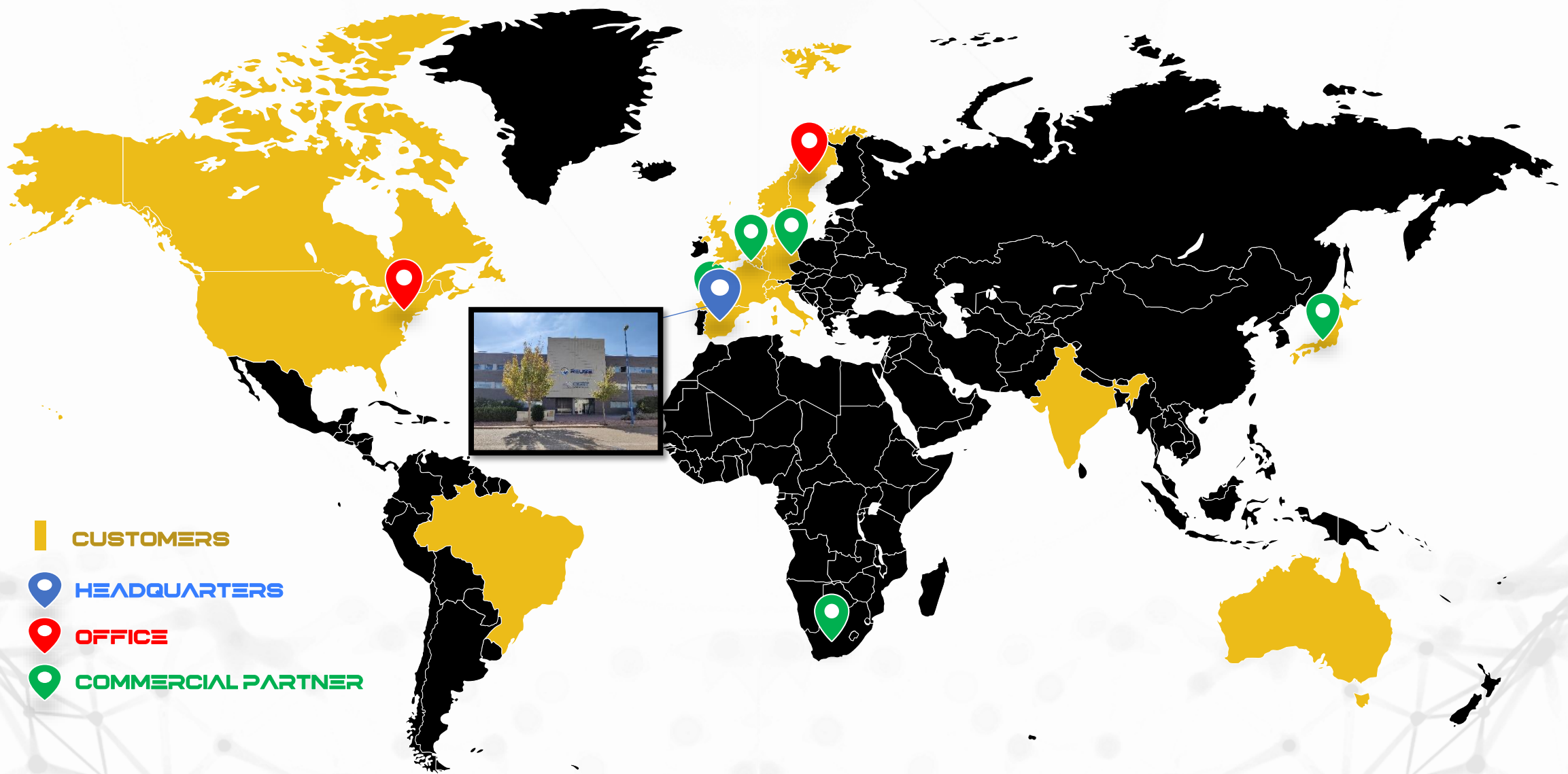




# OUR OFFICES

- *Headquarter in Madrid (SPAIN)*
- *A total of 2100 m<sup>2</sup> in 3 floors*
- *Office in Stockholm for 3 engineers*
- *Professorship program with University Carlos III of Madrid:*
  - *One additional laboratory*
  - *+20 seats*





-  CUSTOMERS
-  HEADQUARTERS
-  OFFICE
-  COMMERCIAL PARTNER

# THE REUSE COMPANY

Is a tool vendor specialized in the application of  
**SEMANTIC TECHNOLOGIES** and  
**ARTIFICIAL INTELLIGENCE** to improve the  
digitalization of the Systems Engineering life cycle.

TRC  
Intro



What we do

Tools and platforms

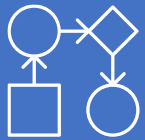
International Standards

Handbooks

# WHAT WE DO

# 01

01



**SES TMP  
TMX**

Technical Management  
Processes:  
Quality  
V&V  
Traces

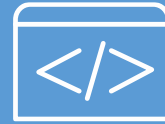
02



**SES INTEROP  
HUBX**

Interoperability HUB  
Connectivity to  
External Sources

03



**SES REQ ENG  
REX**

SMART Requirements  
Engineering  
Using MS Word as  
Tech Platform

04



**SES SLCM  
SLX**

System Life Cycle  
Management

05



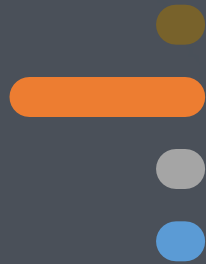
**KNOWLEDGE  
KMX**

Knowledge and Information  
Management  
Ontologies  
Virtual Assistants  
Search eng.





02



# TOOLS AND PLATFORMS

All these capabilities are seamlessly integrated into a **wide variety of tools and platforms:**

- IBM, Siemens, PTC, Dassault, Capella, MagicDraw/Cameo, Simulink
- And other Requirements, MBSE, ALM and PLM tools, including MS Office





03



IEEE 15288

IEEE 29148

IEEE 12207

IEEE 29110

# INTERNATIONAL STANDARDS

Aligned with international standards:  
ISO/IEEE 15288, 29148, 12207, 29110

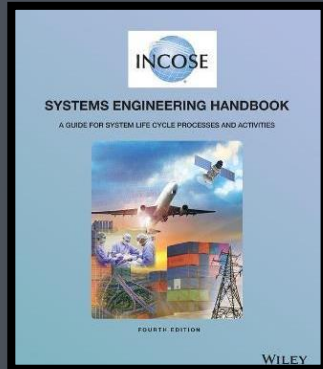




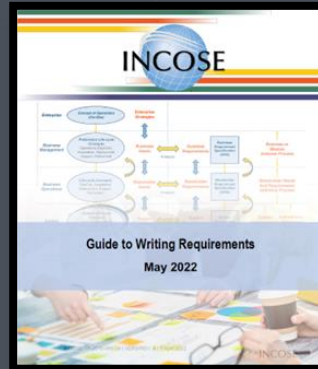
04



# HANDBOOKS AND GUIDELINES



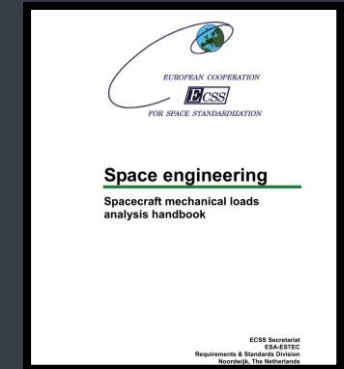
**INCOSE  
HANDBOOK**



**INCOSE  
GTWR**



**NASA**



**ECSS**

# WHO IS USING OUR TECHNOLOGY?

## Aerospace and defense



**AIRBUS**  
GROUP  
INNOVATIONS

**SAFRAN**  
AIRCRAFT ENGINES

**AIRBUS**  
DEFENCE & SPACE

**esa**  
European Space Agency

**THALES**



**aes** **AIRBUS**

**THALES**  
Communications & Security  
S.A.S.

**HENSOLDT**



**ariane**GROUP

## Energy



**FUSION  
FOR  
ENERGY**



**edf**



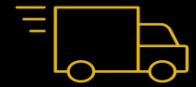
**REPSOL**

## Healthcare



**STORZ**  
KARL STORZ — ENDOSKOPE

## Automotive



**RENAULT**



**TOYOTA**

**FCA**

FIAT CHRYSLER AUTOMOBILES

## Other industries



**SIEMENS**



**ELRA**  
European Land Registry Association

**rtve**



**tirant  
lo blanch**  
GRUPO EDITORIAL



**WHY CONNECTING  
TO PDF?**





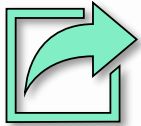
## WHY DO WE USE PDF IN PROJECTS?



SECURED WITH PASSWORDS, NO UNCONTROLLED MODIFICATION CAN BE PERFORMED.



SIMPLE WAY TO DIGITALIZE DOCUMENTATION.



EASILY GENERATED FROM MOST COMMON TYPES OF FILES.



CAN BE USED IN ANY DEVICE.



PERMANENT FORMAT THROUGHOUT SHARING PROCESS.



EFFORTLESS SHARED AND PRINTED.



## CONS OF USING PDFs FOR SE



LACK OF TRACEABILITY WITH NEXT SE PHASES.



HARD TO TRACK EVERY CHANGE BETWEEN VERSIONS OF THE PDF.



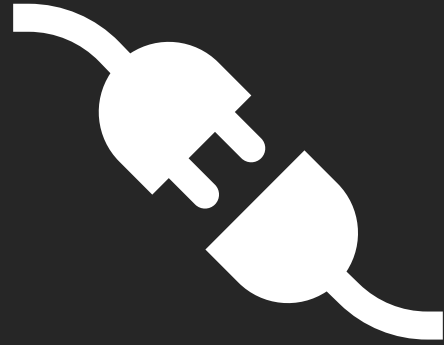
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CANNOT GENERATE BASELINES FOR THE ENTIRE DOCUMENT.



THERE ARE NO ATTRIBUTES WITH ADDITIONAL INFORMATION.



**CONNECTING  
PDFs TO YOUR  
PROJECT**



# PDF CONNECTION WORKFLOW

1



REGULATION V1.0



PARSING



SES ENGINEERING  
STUDIO

2



TRACEABILITY



STAKEHOLDER/SYSTEM REQUIREMENTS IN  
RMS



ALSO ALMS, LOGICAL/PHYSICAL MODELS,  
SIMULATIONS...



# PDF CONNECTION WORKFLOW

3



SAME CONNECTION



SES ENGINEERING STUDIO

CHANGES & VERSION MANAGEMENT

NEW  
UPDATED  
REMOVED

4



SUSPECT TRACEABILITY



STAKEHOLDER/SYSTEM REQUIREMENTS IN RMS

IMPACT ANALYSIS



REGULATION V20



NEW VERSION

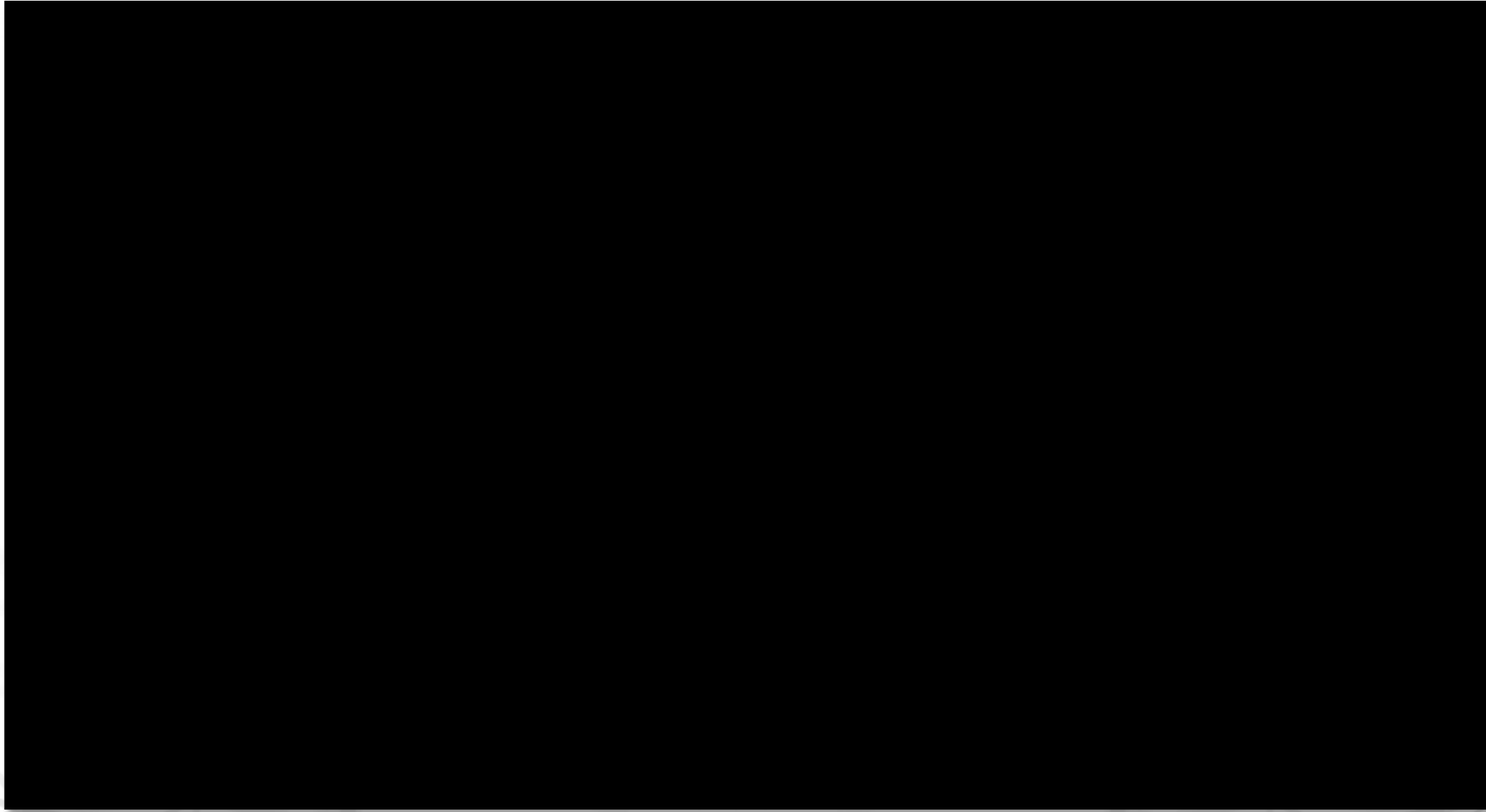




**LESS SPEAKING,  
MORE SHOWING**



# SHOWCASE





**COMING UP  
WEBINAR!**



COMING UP WEBINAR!



THE  
**REUSE**  
COMPANY



Managing Requirements with the SES Add-in for MSWord