



Enabling Science through European Electron Microscopy

Dissemination and Communication Plan

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Revision history log

Version number	Date of release	Author	Summary of changes
V0.1	12/04/2019	Paul Bersans (Euronovia)	First draft
V0.2	29/04/2019	Paul Bersans (Euronovia)	Second draft
V1.1	30/04/2019	Peter van Aken (MPG – Coordinator)	Proofreading and submission of the document

Introduction

The ESTEEM3 consortium is fully aware that a dissemination and exploitation plan is extremely important to maximise the impact of the TA scheme and to create awareness of the project results. ESTEEM3 will integrate several activities to enhance the dissemination and exploitation of results, and to develop sustainability for the continuation of the project activities after EU funding ends. The strategy for dissemination and exploitation of results is illustrated in the figure 1 below.

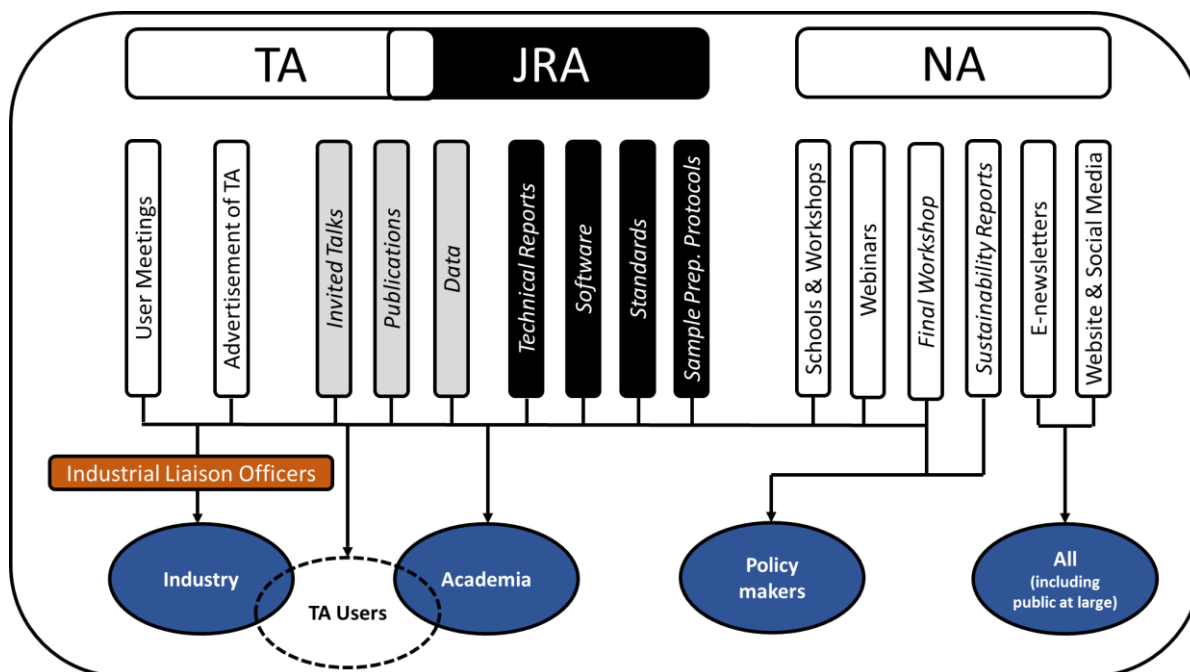


Figure 1: The overall dissemination, exploitation, and communication strategy.

Dissemination actions are given in italics, communication activities in normal text. Different actions target several audiences. Dissemination and communication towards industry will be facilitated by the Industrial Liaison Officers (ILOs).

Purpose of the Exploitation and Dissemination actions

In accordance with EU objectives for dissemination of research projects, each ESTEEM3 dissemination action will aim to:

- show how European collaboration has achieved more than would have otherwise been possible, notably in achieving scientific excellence, contributing to competitiveness and solving societal challenges;
- show how the outcomes are relevant to our everyday lives, by creating jobs, introducing novel technologies, or making our lives more comfortable in other ways;
- make better use of the results, by making sure they are taken-up by industry and the scientific community to ensure follow-up, and also by decision-makers to influence policy-making.

Document Maintenance

This document will be reviewed and updated annually (M16, M28 and M40), as the project proceeds. This document contains a revision history log. When changes occur, the document’s revision history

log will reflect an updated version number, the date of the new version, the author making the changes, and a summary of the changes.

Responsibilities

EURONOVIA is the leading beneficiary in charge of writing this deliverable. However, the content of the deliverable was discussed and agreed with all project members, and then approved by MPG (as project coordinator and WP3 leader).

Internal dissemination and communication management

All project participants will be updated permanently about the project advances and reports. Important documentation will be stored on the internal, access-based platform hosted on the ESTEEM3 website.

Dissemination and Exploitation Strategy

Dissemination and Exploitation objectives

Dissemination and Exploitation issues are dealt with in Work Package 3, which objectives are to:

- identify the potential different routes for innovation and exploitation of the project results, as well as the protection of intellectual property rights;
- disseminate the information about the ESTEEM3 project to a wide range of relevant stakeholders and to the public at large through various dissemination activities;
- plan the post-project exploitation of the project's results by the partners so as to maximize the project's impact on the participating organizations and on the European industrial sector.

Dissemination target audience

Dissemination groups

ESTEEM3 will address the widest audience as possible, with specific messages and channel of communications for each type of audience.

Mapping closely the audience is essential in choosing the most efficient ways to communicate. Within the audience, we can define several groups that have an interest or are going to be affected by the ESTEEM3 project. These groups are classified in three categories, taking into account their level of interest and their level of power.

The primary group is the main group within the target audience. The major part of the dissemination actions will be targeted to this group. This is where we can expect the maximum impact in terms of potential collaborations and use of ESTEEM3 installations. Only by mapping the needs and interests of this group, ESTEEM3 can produce messages that will be understood and widespread in the most efficient form.

The primary group will be composed of:

- The academic community that benefit or could benefit from TEM characterization and analysis, in particular in materials science, physics, chemistry, biology, or geology.

- Companies faced with specific materials issues that could be solved with TEM characterization and analysis

The secondary group is composed of actors affected by the success of the project, although not identified as primary target group. It will include:

- Policy makers in partners countries or regions
- Researchers and engineers of TEM and TEM components manufacturing companies

The tertiary group consists of the general public and other actors that can find interest in the project. More particularly, the tertiary group will include:

- University students
- Partners' local stakeholders

Targeted audience

Academic and non-academic research community	This group targets all research communities interested in the ESTEEM3 project's developments, results and innovation. Scientific contributions of ESTEEM3 are particularly interesting for researchers that need to characterize (nano)materials.
Industrial sector	<p>A major objective of ESTEEM3 is to address and trigger the active involvement of companies in the Transnational Access scheme.</p> <p>An initial list of companies that have recent or ongoing collaborations has been set up in D3.2. It includes the following companies:</p> <p>Acerinox ads-tec GmbH AG der Dillinger Hüttenwerke AGC Flat Glass Europe Airbus Alicona Imaging AMS Sensors Anton Paar AstraZeneca Automotive Lighting Reutlingen GmbH Bekaert Benteler BH Poland sp.zoo Borealis Linz BorgWarner BERU Systems GmbH CEA Cadarache Coperion GmbH CrayoNano Daimler AG</p>

	<p> Dr. Fritsch GmbH & Co. KG Electrosiences ElringKlinger AG EpiShine Essity Evonik Resource Efficiency GmbH Explomet Zakład Technologii Wysokoenergetycznych Exxon Mobil Gatan Inc General Electric Company Polska Sp. z o. o. General Electric India GlaxoSmithKline Haldor Topsoe A/S Hydro Aluminium Indigomed Johnson Matthey Kirchhoff Automotive GmbH (Attendorn, Germany) Microsoft Quantum Neuman Aluminium Nexans Nippon Steel & Sumitomo Metal Corporation Norsk Titanium NXP P&G PN Sensor Pratt & Whitney Aero Power Rzeszów/Hamilton Sundstrand Poland Pratt & Whitney Rzeszów S.A. PROGRESJA S A Robert Bosch GmbH Rolls Royce Saint-Gobain Samsung Soitec Solvay STMicroelectronics Tecnan S.L. Thales ThyssenKrupp Steel Europe AG Titania, Ensayos y Proyectos Industriales Total Treibacher Industrie AG Umicore Voest Alpine Linz </p> <p> In addition, an External Advisory Board will be set-up with the aim to maintain a strong business focus in the project. Three members of the EAB will belong to the industrial sector and will provide valuable feedback on the project, introduce challenging requirements to be </p>
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	<p>considered, and will have a major impact on the project’s development.</p>
<p>Government bodies, professional associations, and policy makers</p>	<p>This is a wide group encompassing innovation regional authorities, professional associations, and public administrations at regional and national level.</p> <p>ESTEEM3 will establish links with the Alliance for Materials (A4M) as well as to the large European Materials Research Society (EMRS) and the Federation of European Materials Societies (FEMS).</p>
<p>EU technology Clusters</p>	<p>ESTEEM3 shares common goals with the European Materials Characterisation Council (EMCC) to develop and improve characterisation tools in order to bring the development of nanomaterials and advanced materials in Europe into end products more successfully.</p> <p>ESTEEM3 will seek close interactions with other clusters, in particular the European Materials Modelling Council (EMMC), European Pilot Production Network (EPPN), the NanoSafety Cluster (NSC), the EuMaT – European Technology Platform for Advanced Engineering Materials and Technologies, and the Nanofutures initiative..</p>
<p>EU projects working in similar domain</p>	<p>Several projects funded by the European Commission offer transnational access for characterisation of materials. Connecting with the partners of these projects might result in fruitful exchanges and advancement of knowledge. Moreover, in some cases, ESTEEM3 partners participate in these projects. This will offer the opportunity to establish quick links among the European research community.</p> <p>For example, EUSMI provides an interdisciplinary infrastructure for soft matter research. NFFA sets out a platform to carry out comprehensive projects for multidisciplinary research at the nanoscale extending from synthesis to nanocharacterization to theory and numerical simulation.</p>
<p>TEM manufacturing companies</p>	<p>TEM manufacturers and TEM component manufacturers are also obvious stakeholders of the project. We can mention:</p> <p>TEM manufacturers</p> <ul style="list-style-type: none"> • ThermoFischer (USA) • JEOL (Japan) • Hitachi (Japan) • Nion (USA) <p>Component manufacturers</p> <ul style="list-style-type: none"> • SPi Supplies (USA) • Raith GmbH (Germany) • Diatome (USA) • Bruker (Belgium) • Ted Pella, Inc (USA)

	<ul style="list-style-type: none"> • Gatan, Inc. (USA) • EO Elektronen-Optik-Service GmbH (Germany) • Cameca (France) • EDAX, Inc. (USA) • Leica Microsystems GmbH (Germany) • Direct Electron (USA) • Agar Scientific Ltd (UK) • EM Resolutions Ltd (UK) • DYNAMIC OPTICS (Italy) • HREM Research Inc. (Japan) • TESCAN (Czech Republic)
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The Message

There are many ways to communicate on the project activities and results. Here are some messages that could be promoted through the dissemination activities:

- Advertise the ESTEEM3 project itself (general scope, coverage, goals and milestones and plans to reach them)
- Advertise the ESTEEM3 Transnational Access scheme
- Advertise ESTEEM3 freely available outputs such as software and protocols for sample preparation
- Advertise ESTEEM3 results and publications

Dissemination and communication activities

The following table gives an overview of the dissemination actions to be carried-out in ESTEEM3.

Audience	Need	Measure or action	Type of action	Time of delivery	Key Performance Indicator
Project members	Clear rules for confidentiality and ownership of results	Consortium Agreement	Protection	Before the beginning of the project	N/A
	IP protection	Patents	Exploitation	When possible	Filed applications
	Information on progress and reporting procedures	Intranet platform, management handbook	Communication	M4 and annual updates	N/A
	Feedback from the TA users	User meetings and user surveys	Communication	M24, M48	Number of answers to users' surveys
TA users	Information on TA offer and rules	E-Mailing Website Brochures User meetings Conferences	Communication	M1 and annual updates M4 and continuous updates M6 M24 and M48 When possible	Number of TA users
	Experimental data	Transfer of collected data	Dissemination	Throughout duration of project	Number of finalised TA projects
Scientific community	Project overview and outcomes	E-newsletter Technical reports Software Sample prep. protocols	Dissemination	Throughout duration of project	Number of downloads from the ESTEEM3 website
	Access to ESTEEM3 publications	List of ESTEEM3 publications with reference	Dissemination	Within 6 months after publication	Total citations of ESTEEM3 publications
	Training on TEM techniques	Webinars Lunchtime lectures Schools Workshops	Communication	Throughout duration of project	Number of attendees per event
Industry (end users)	Project overview, Key contacts,	Industrial Liaison Officers, Website,	Dissemination	From beginning M4	Number of contacts made by end-user companies

	Better knowledge of TEM capabilities	E-newsletter		Every 6 months	
	Training on TEM techniques	Webinars Lunchtime lectures Schools Workshops	Communication	Throughout duration of project	Number of attendees per event
Electron microscopy manufacturers and suppliers	Project overview, key contacts, understanding of technology gaps, possibilities for involvement in the medium-term	Involvement of TEM manufacturers and suppliers in foresight studies (NA1)	Exploitation	M46	Number of recipients of the White Paper
Policy makers	Project overview, strategic decision baseline, potential impact	Sustainability report Final workshop	Dissemination	M48	Number of recipients of the report Number of attendees at the final workshop
Public at large	General education Impact on future daily life	Website E-newsletter Social media Wikipedia	Dissemination	M4 Every 6 months Throughout the project	Number of visits to the website Number of recipients of ESTEEM3 posts

Indicative GANTT chart of ESTEEM3 dissemination activities

The planning and execution of the activities require a good scheduling closely aligned with key project deliverables.

The dissemination activities are to be performed according to the following logical schedule:

- 1) Initial awareness phase (month 0-3): this especially includes establishment of the project website, analysis of relevant information resources in terms of identification of dissemination opportunities and creation of basic dissemination tools including graphical identity of the project (i.e. project logo, templates for project documents and for project presentations).
- 2) Targeted dissemination phase (month 3-42): the consortium will enrich the website, publish a project brochure, issue the first press releases and attend selected events. The TA offer will be presented to the target audiences.
- 3) Presentation of results (month 42-48): this represents the period close the end of the project when ESTEEM3 reaches its most significant outputs. This phase will be focused on informing the target audience for potential exploitation of results.

The tentative GANTT chart below gives an indication of the scheduling of the dissemination activities. This schedule may change as the project goes along, in order to ensure that sufficient results or news are disseminated at each step.

ESTEEM3 – Dissemination and Communication Plan

	Year 1				Year 2				Year 3				Year 4				After project			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
COMMUNICATION ON PROJECT ACTIVITIES																				
Public website		■																		
Education hub available on the ESTEEM3 website		■																		
Dissemination in social media (LinkedIn and Twitter)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
E-newsletters		■		■		■		■		■		■		■		■		■		■
ESTEEM3 brochures		■																		■
ESTEEM3 video			■																	
DISSEMINATION OF PROJECT RESULTS																				
Publications and invited talks		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Open access technical reports (deliverables)		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Open access standards, software, and sample preparation protocols		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sustainability report																				■
EVENTS																				
ESTEEM3 workshops and schools		■	■	■		■	■	■		■	■	■		■	■	■		■	■	■
ESTEEM3 webinars				■				■				■				■				■
Presentation of ESTEEM3 at selected conferences		■	■	■							■									
Cconference session dedicated to 'TEM in industry' at EMC 2020							■													
ESTEEM3 User meeting																				■
ESTEEM3 final workshop																				■

Achieved ■
 Upcoming ■



Description of activities

Dissemination material

The visual identity of ESTEEM3 includes the logo (see below), and style guide in different formats (in line with the H2020 visual guidelines). A standard Powerpoint presentation as well as various Word templates gathering key messages and one-page project description have been created. These templates have been sent to partners for EU and local project communication.

Short design guidelines for using all communication and dissemination tools have been developed and delivered to the whole consortium. This document gives details and rules on how to use the different elements of the visual identity of the project.

ESTEEM3 logo



The ESTEEM3 pictograph shows a representation of a Transmission Electron Microscope inserted in an E (for ESTEEM). The middle lines across represent the sample holder and remind the € sign, probably the greatest achievement of the EU so far. The white bar inside the microscope represents the electron beam.

esteem is written without capital letter to remind the e^- of the electron. Thirteen stars encircle the “3”. Each star represents one of the TA providers.

Colours are blue and yellow to remind the European flag.

ESTEEM3 website

The ESTEEM3 website is the main communication tool for the project, where all the dissemination materials will be timely published. It is dynamic, frequently updated and the content will be expanded constantly during the project lifetime. The website is available online since the 1st April 2019. New sections of the website will be put online one after the other in the first months. The final version will include the following features:

- The **home page** including the ESTEEM3 logo, the latest news and a mention of the European funding
- An **“About us”** section including an overview of the ESTEEM initiative, the presentation of the consortium and the integration and sustainability activities proposed within the project
- An **“Access”** section dedicated to ESTEEM3 future users
- A **“Service provision”** section where ESTEEM3 outputs such as sample preparation protocols, software for data analysis and technical reports will be made available to the TEM community



- A “**Research**” section including a description of the three Joint Research Activities as well as a list of ESTEEM3 publications
- A “**Training**” section including links to the upcoming training events and online training material
- A “**Communication**” section including all ESTEEM3 communication material
- An “**Intranet**” section for consortium members to share key documents about the project

Brochures

The ESTEEM3 brochures will be multi-page documents containing information on the project. Each partner will receive a set of printed versions to distribute. Moreover, an electronic format of the brochures will be available on the Website.

The main objective of the first project brochure is to provide ESTEEM3 audiences with an attractive and written project overview, and a summary of the main project objectives and characteristics. This brochure will be designed to reach potential new TA users.

A second version of the brochure will be implemented at the end of the project. This version will focus on the ESTEEM3 results and potential exploitation opportunities.

E-newsletter

ESTEEM3 newsletters will be available on the project website and will inform all interested stakeholders of the progress of the project during the project lifetime (twice a year). In addition, a list of potential recipients to whom the newsletter will be sent by e-mail will be created with the help of all partners and regularly updated.

Social media

LinkedIn and Twitter accounts have been created to inform directly the ESTEEM3 followers of the latest news and achievements.

Publications and press articles

Communication to the general public such as press articles will be actively promoted on the website and social media (with all its interactive material).

Events and conferences

Workshops and schools

Twelve workshops and schools are already scheduled:

2019:

- NanoMEGAS – Protochips workshop (Amiens – additional meeting not indicated in the Grant Agreement)

- EMAT Workshop on transmission electron Microscopy (Antwerp)
- Conventional and Counting EELS Spectroscopy school (Catania)

2020

- TEM-UCA Transmission Electron Microscopy of Nanomaterials (Cadiz)
- The 6th Stanisław Gorczyca European school (Krakow)
- ESTEEM-Spectroscopy School (Graz)
- Advanced in Situ Electron Microscopy of ICT Structures (Gothenburg)

2021

- QEM: Review and New Advanced TEM techniques (Toulouse)
- Workshop on Advanced TEM Specimen Preparation (Stuttgart)
- Electron diffraction for solving engineering problems (Trondheim)

2022:

- European Workshop on Quantitative STEM imaging (AdSTEM, Ljubljana)
- School on in-situ TEM (Juelich)

Webinars

Several will complete the training offer. Their exact schedule will be defined at the first ESTEEM3 General Assembly.

- Low-loss EELS modelling and tomography (TUGRAZ)
- Preparations and considerations for in-situ microscopy of ICT structure (CHALMERS)
- In-situ techniques (JSI)
- Open software for TEM image simulation (UANTWERP)
- Computer-assisted electron crystallography (UCA)
- Industrial webinars

[Project deliverables](#)

All project deliverables are public deliverables. They will all be available on the ESTEEM3 website under the “Service Provision” section.

Open Access policy

[Open access to publications](#)

The access policy will give priority to the Green model. However, when not applicable with some renowned journals, the publication policy of the consortium will be to pay the fees to make the scientific publications free of access. All partners are encouraged to use the Open Access pilot repository initiated by the European Commission <https://www.openaire.eu/>.

Open access to data

ESTEEM3 intends to participate in the Open Research Data pilot. In this respect, a Data Management Plan (DMP) will be submitted within the first 6 months of the project. The DMP will specify the data to be generated or collected, the digital data formats (selected to minimize technological dependencies), the metadata format, the data sharing, and the repository.

Evaluation of results with Key Performance Indicators (KPIs)

During the ESTEEM3 lifecycle, two mechanisms are used to review the progress of the dissemination activities and provide feedback to the project:

1. Key Performance Indicators.
2. Reports regarding the dissemination activities

Key Performance Indicators (KPIs)

Key Performance Indicators (KPI's), are a measuring factor for the performance and progress of an activity, message, task, etc. towards its expected impact. They will be used to assess the performance of the dissemination activities all along the project duration and realign the dissemination plan if necessary when KPIs are not matched and the expected impact not reached.

Brochure: 700 brochures will be printed at M6 and will be delivered to:

- all beneficiaries, for their own communication
- potential TA users (at selected conferences)
- important stakeholders
- the European Commission

The brochure will be updated before the end of the project, taking into account the results of the projects. This final brochure will be printed in 500 copies.

Website: The project website is the essential dissemination tool for ESTEEM3. Hence, the project coordinator will get a quarterly update on:

- Number of visits to the ESTEEM3 Website (traffic)
- Activity & site path reports.
- Traffic from web pages that link to the ESTEEM3 website.
- Traffic of the channelling of visitors reaching the site via search engines.
- Countries of website's visitors
- Questions asked through the contact page of the website

Newsletter: The newsletter is a good way to estimate the number of interested stakeholders. MailChimp is able to provide a detailed evaluation about the users who download the newsletter.

- How many people have subscribed the ESTEEM3 newsletter?

- How many people have opened the newsletter?
- Where are the subscribers from?
- What kind of background have the subscribers?

News and Press Releases: The ESTEEM3 project aims to publish more than 200 news and press releases about the project results in addition to the deliverables, announcements (i.e. when the website is online) and important milestones.

Events: ESTEEM3 training events will be advertised on the website and in the newsletters. A list of attendees to these events will be kept and used for future dissemination actions. Other information collected will include:

- Number of events where ESTEEM3 is presented
- Feedback obtained from audience
- Questionnaire data information gathered at the events organised by ESTEEM3 (workshops and exhibition booths)
- Participant profile (policy makers, scientific and research, academy, industry, general audience)

Social Media: The following indicators will be measured on Twitter and LinkedIn:

- Responses to publications.
- Number of contacts in LinkedIn group account.
- % increase of comments
- Number of inquiries received

Email: The following indicators will apply:

- Feedback from contacts.
- Number of e-mails received from Stakeholders
- Number of inquiries received

Publications: The following indicators will apply:

- Responses to publications
- Citation of ESTEEM3 in Scientific Publications.
- Number of Non-scientific Publications disseminated

Media appearances: The following indicators will apply:

- Number and type of media appearance: to monitor the number of impacts in which the project has appeared/been mentioned in any media (i.e. publications, article, new, interview, workshop, etc).