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A Sector Skills Alliance

Project Acronym: METIS

Project Full Title: MicroElectronics, Training, Industry and Skills

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Action Type: Sector Skills Alliances for implementing a new strategic approach (Blueprint)

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WP5 Quality Assurance

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METIS Project: MicroElectronics Training, Industry and Skills

D5.2 METIS First Interim Quality Report





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Introduction

This Interim Quality Report (IQR) is produced at the end of the first year of activity (M1 - M12) of the METIS Project and illustrates the Monitoring & Evaluation and Quality Assurance (M&E and QA) activities carried out in that period. Chapter 1 describes the METIS Quality Plan; Chapter 2 shows the results of the M&E exercise carried out by the partners at the end of the first year; Chapter 3 describes the M&E and QA procedures adopted for the tasks performed and deliverables produced in the reference period; Chapter 4 illustrates the procedures implemented for the selection and contracting of the external expert; the final notes in Chapter 5 illustrate the suggestions and proposals targeted at a finetuning of the M&E and QA methodology and tools, to better adapt them to specific phases of the Project.

The METIS Project and the related Quality Plan provide for the production of an IQR at the end of each year of activity. The IQR contains details about M&E and QA activities and results of the year. It is also fed by the periodical reporting from partners, to keep constant track of the evolution of the Project activities and results and their evaluation and benchmarking against expected quantitative and qualitative outcomes. The IQR also outlines measures to be undertaken to improve any aspect of the Project implementation, including internal processes, deliverables, communication.

M&E and QA are horizontal aspects of the implementation process of the METIS Project. They permeate the Project as a whole at different levels: Consortium and individual partners; activities carried out and outputs produced; workplan and timeline; budget. They are also closely linked with all the other Project's activities: tasks are monitored, evaluated and benchmarked against qualitative and quantitative levels. M&E and QA are implemented in a coherent system. The management system, procedures, and quality assessments are assured by internal review to ensure compliance with the overall Project plans, to guarantee that the implementation of activities and the production of results and outcomes contribute to the achievement of the Project objectives, to avoid deviation, anticipate risks and devise mitigation measures.

1. The METIS Quality Plan

The METIS Quality Plan (MQP) implements and facilitates the use of assessment tools for the Project's participants in an ongoing (formative) and final (summative) process. All partners, irrespective of their role in specific work packages or activities, participate in the monitoring of the Project implementation, in order to contribute to the overall formative and summative evaluation, and also self-evaluate the Project activities carried out. The participants', users' and target groups' satisfaction are monitored also with the support of an external evaluation expert (see Chapter 4).

MQP for the general monitoring and evaluation of the METIS Project:

- introduces the METIS M&E and QA System;
- defines working procedures, guidelines, timing and operational tools to ensure the quality standards of the Project's activities, deliverables and outcomes;
- defines qualitative instruments to monitor the quality of the Consortium and of the Project Management;
- identifies key performance indicators;
- defines tools to assess the quality of the dissemination and communication activities.

MQP has been produced as a practical document, to enable the Project Team to quickly identify the correct formats, processes and procedures to ensure that the METIS Project achieves the overall standards necessary for fulfilling its objectives. It may be modified during the Project's lifetime, subject to the needs and opportunities that may emerge and will be recognised as relevant by partners.

The MQP first chapter introduces the METIS Project, describes its management and coordination structure, and explains interactions between management and coordination and quality assurance. The second chapter describes the METIS Quality Assurance system, the roles and tasks of the actors involved, the methodology and the tools developed to evaluate the Project outcomes and results. The third chapter describes the timing and the quality measures for each work package. Questionnaires and forms to be used in the M&E and QA process are included as annexes.

The first draft of the MQP was circulated by the WP5 leader in M2; partners were consulted to evaluate the draft, give proposals and make suggestions; based on the partners' feedback, WP5 leader produced a new draft, that again was circulated for evaluation and suggestions; based of the feedback given by partners, the MQP was finalised on schedule at the end of M3 and uploaded on the CIRCABC Project's Library.

2. Results of the monitoring and assessment (M&E) of the Project by partners

During the first year of the METIS project implementation, Monitoring & Evaluation and Quality Assurance were implemented by all partners under the guidance of CIMEA. Each partner appointed a specific staff member with relevant experience (M&E and Quality) as member of the Internal ME and QA Committee to implement quality-related tasks in METIS (see Annex 1). METIS Partners constantly monitored the project with precise oversight of implementation of tasks, production of deliverables and outputs and their impact to ensure the achievement of project objectives.

A feedback form was distributed to the partners in order to evaluate the METIS Project at the end of the first implementation year (November 2019 - October 2020). The questionnaire was drafted of the basis of the form included in the METIS Quality Plan and uploaded on Google Drive, in order to facilitate its filling and the collection of answers. Based on a scale ranging from 1 (very satisfied) to 4 (very dissatisfied), partners were invited to evaluate different aspects of the Project structure, organisation and implementation. Partners were also invited to add comments, and to make suggestions for improvements, as appropriate.

Twelve feedback contributions were collected. Average scores for the different topics range from 1,3 to 1,8 (see Annex 2 for details). A summary of the different topics' average scores, the final evaluation score for the first implementation year is 1.5. It shows a widespread positive appreciation of the Project implementation and the functioning of the partnership with good organisation and support from the team leader and partners.

General comments on the Project implementation were made, as well as recommendations on giving more relevance to specific aspects of the work to be done. Suggestions for a revision of the QA Plan were also made, in order to better tailor its tools to the different phases of the project implementation (see Final notes for details).

Internal M&E and QA will be integrated with External QA, performed by the METIS External Quality Committee (EQC), composed of associated partners mobilised by the Project partners, to ensure objective and external quality control. The task of EQC is to evaluate the main Project deliverables and provide the METIS Consortium with critical feedbacks. During the first year of the Project implementation, EQC was not involved, as deliverables with external relevance will be developed in the next phases of the Project implementation.

3. M&E and QA procedures adopted for deliverables produced in M1 - M12 of the METIS Project

D1.1 METIS Roadmap (M2)

D5.1 METIS Quality Plan (M3)

D6.1 Dissemination and Exploitation Plan (M3)

D8.1 METIS Project Management Plan (M3)

The process for producing these deliverables was carried out following the methodology set up in the QA Plan: a first draft was circulated by WP leaders; partners were consulted to evaluate the draft, give proposals and make suggestions; based on the partners' feedback, WP leaders produced a new draft, that again was circulated for evaluation and suggestions; based of the feedback given by partners, deliverables were finalised on schedule. The "Deliverable Assessment Form" provided in the METIS Quality Plan has not been used in the M&E and QA process for producing these deliverables, since it was not yet available. No limitations to an appropriate M&E and QA procedure ensued, due to the mainly methodological class and contents of the deliverables.

D6.2 METIS Website and Platform (M3)

This deliverable was produced in parallel with D6.1, in which methodology is described for the establishing of the website. The process followed was the same as described for the deliverables above. D6.2 went online on schedule.

D2.1 Common Methodology to Assess, Anticipate, Monitor Evolution of the Microelectronics Sector with a Focus on Skills and Competences (M7)

The process followed was the same as described for the deliverables above. The time frame for producing the deliverable was rather long, since the methodological guidelines for the production of reports on "Skills and occupational profiles for microelectronics" and "METIS skills strategy" have been discussed and progressively developed through consultations with partners repeated over time with the collection of evaluative inputs and suggestions. D2.1 went online on schedule. The agreed methodology envisaged a number of focus groups (FGs) to carry out qualitative analyses on the subject of skills needs in Europe, in order to contribute to the quoted reports. The FGs organisers were invited to use an ex-post evaluation questionnaire to assess different aspects of FGs and relevance of the outcomes in relation to the overall targets of WP2. The ex-post evaluation exercise was carried out in at least two FGs. An ad hoc questionnaire (see Annex ...) was developed by the WP5 leader, to be included in the METIS QA Plan and used also in future similar circumstances.

D8.2 METIS meetings minutes (M1 - M7)

The process followed for the Minutes of the meeting held on M1 was the same as described for the deliverables above. D8.2 went online on schedule. The Consortium meeting expected in M7 has been postponed due to the effects of the COVID pandemic.

4. The METIS External expert

The task of the External expert is to monitor from an external point of view the quality of the METIS Project. His/her skills include: the expert is entrusted to give advises and recommendations to the Project coordinator and write an evaluation report at mid-term and at the end of the Project. The External expert informs the partnership about the Project implementation, providing an external perspective to achievements so far reached, and the overall performance of the Project against Project plans and objectives. The External expert also provides recommendations on the various aspects of Project implementation, including quality of the Consortium, working relations, internal communication, processes, results, etc.

The External expert carries out the mid-term Quality assessment of processes and results and produces the mid-term and final external Quality Report.

A "Call for expression of interest" was launched by the Project coordinator (February 15, 2020) in order to select an appropriate professional with the required competences, as specified in the Terms of Reference (ToR, see Annex 4). METIS Partners were invited to spread the call for expression of interest for the selection of the External expert and propose suitable candidates, possessing the required expertise. Many applications were collected. The External expert was appointed the 26th August 2020 by the Project coordinator. The nominee, Mr Roger De Keersmaecker (PhD, MBA, Em. Prof. KU Leuven), was engaged after the positive feedback from the METIS Project partners.

5. Final notes

The final evaluation of the METIS Project is largely positive as shown by the results of the M&E exercise carried out with a broad participation of the partners.

This assessment is confirmed by the final comments. Among others, comments underline the good organisation and support by the team leader and the partners, and the possibility of developing new ideas and new opportunities for networking.

Final suggestions and recommendations underlined some points to pay attention to in the near future: among others, internal communication, and the monitoring of the the impact of COVID-19 pandemic (e.g., on workload).

Moreover, a review of the METIS Quality Plan is suggested, based on the following:

- particular aspects of the project implementation may have a different weight in different phases (e. g. initial phase vs. final phase);
- the questionnaires might be better tailored to different phases of the Project;
- questionnaires may be enriched by inserting new topics;
- more developed evaluation scales may be provided.

Based on these remarks, a revised QA Plan will be submitted for approval by the WP5 leader to the Internal M&E and QA Committee, to become operational in year two of the METIS Project.

Annex 1

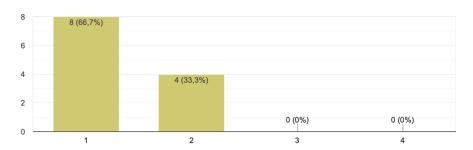
The METIS Internal QA Committee Members

Name	Partner institution	
Emir Demircan	P1 - SEMI Europe, DE	
Julia Gabriel	P2 - Infineon Technologies Austria AG, AT	
Thomas Fleischmann	P3 - Robert Bosch GMBH, DE	
Carole Lauriat	P4 - X-FAB France, FR	
Amaia Zuturuza	P5 - Graphenea Semiconductor, ES	
Sami Suihkonen	P6 - Summa Semiconductor Ltd, FI	
Bekir Ozyurt	P7 - Arcelik, TK	
Frank Bosenberg	P8 - Silicon Saxony, DE	
Bernd Deutschmann	P9 - Technische Universität Graz, AT	
Jeroen Geusens	P10 - Interuniversitair Micro-Electronica Centrum	
	Imec, BE	
Dagmar Bartels	P11 - Dresden Chip Academy - SBH Südost GmbH,	
	DE	
Roy Kenneth Skulstad-Hansen	P12 - Universitetet i Sørøst-Norge, NO	
Slavka Tzanova	P13 - Technical University of Sophia, BG	
Oliver Krammer	P14 - Budapest University of Technology and	
	Economics, HU	
Marianna Muin	P15 - IAL Innovazione Apprendimento Lavoro -	
	Friuli-Venezia Giulia, IT	
Giovanni Finocchietti	P17 - CIMEA - Centro di Informazione sulla Mobilità	
	e le Equivalenze Accademiche, IT	
Mia Norling	P18 - WiTEC - European Association for Women in	
	Science, Engineering and Technology, SE	
Gregory Makrides	P19 - EACG European Association of Career	
	Guidance, CY	
Olivier Coulon	P20 - DECISION Etudes & Conseil, FR	

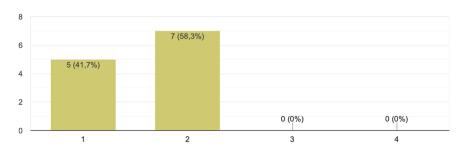
Annex 2 Analysis of the Internal evaluation questionnaire results (first implementation year: November 2019 - October 2020)

Note: 1 = very satisfied, 4 = very dissatisfied

Project management (e.g. scheduling, task assignment, work process & deadline monitoring) $_{\rm 12\,risposte}$

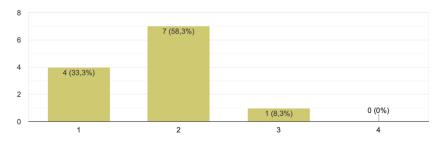


Governance (e.g. decision-making, consultation and problem-solving) 12 risposte

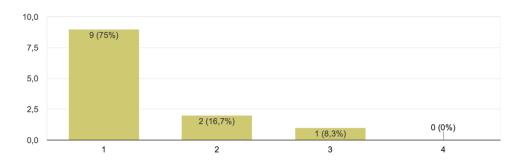


Management of financial issues

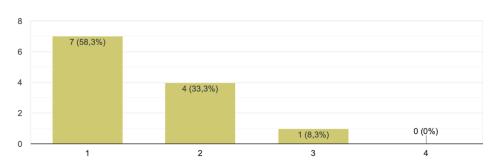
12 risposte



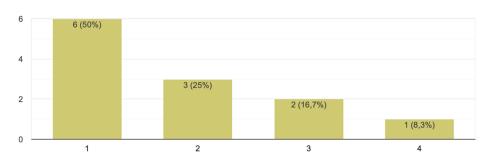
Communication among partners and with the project coordinator $\ensuremath{\text{12 risposte}}$



Quality & impact of the dissemination activities (e.g. website, presentations at meetings, etc) $^{12\, risposte}$

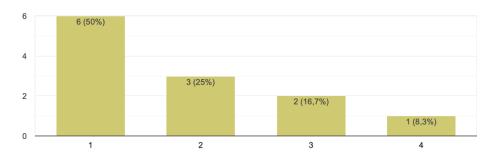


Quality & impact of the sustainability aspects within the life cycle of the project $\ensuremath{\text{12\,risposte}}$



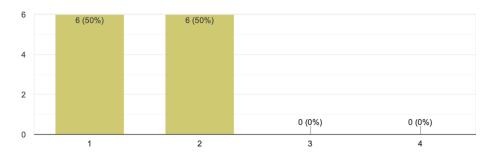
Improvement of the skills in your organisation

12 risposte



Functioning of the partnership

12 risposte



Annex 3

Terms of Reference for the external Expert

Profile of the external expert:

The selected external expert has to demonstrate some relevant skills, including:

- robust understanding of quality processes, expected activities, outputs and quality review processes;
- proven professional experience in evaluation process and monitoring process of international collaborative projects, in order to efficiently evaluate the final products and contents of the training activities, publications and other materials, as well as to monitor the administrative aspects and the management and functioning of the project from an organisational point of view;
- excellent English language and reporting skills.

Task

- to review METIS processes and products;
- to participate in 2 project meetings.

Deliverables

Mid-term Report about project implementation provides an external perspective to achievements so far reached, and the overall performance of the project against project plans and objectives. It also provides recommendations on the various aspects of project implementation, from quality of the consortium, working relations, internal communication, processes, results, etc.

Final Report ensures an external and professional perspective into project processes and results. In addition to capturing the overall quality of the project in all its aspects, it also provides valuable lessons learned and good practices to inform the work of partners in further exploiting project results beyond its lifetime.

Timeline:

Mid-term report: October 31, 2021 Final Report: October 31, 2023

Conditions for the service

The external expert is provided full access to all project documentation to empower her/him to carry out a thorough assessment of the project. The external expert undertakes to carry out the required service within the specified timeframe. The external expert agrees to maintain the confidentiality of data that may be generated or disclosed during the provision of the required service.

Total Fee amount

€ 10,000.00 (ten thousand Euros)