

Innovative pilot for Silicon production with low environmental impact using secondary Aluminium and silicon raw materials

Project acronym (SisAl Pilot)

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INTRODUCTION

This deliverable provides a report about the Clustering event SisAl Pilot has organized in the framework of its activities, as indicated in the Grant Agreement under Task 6.3 Clustering and EU stakeholder workshop organization: 'The consortium will also organize 1 joint clustering event under the umbrella of EIT Raw materials, with an international research focus, inviting among others, our international collaborators. Conclusions of the workshops will be public, described on SisAl Pilot's website as well as in this deliverable'.

This report includes the program elaborated, the synergies implemented among different types of stakeholders invited as speakers to provide a comprehensive overview of the topic faced, and the actions implemented to widely inform the public about the event, including also visual examples of the D&C activities performed.

1.1 CONTEXT AND SCOPE OF THIS EVENT

As agreed in the Grant Agreement, under Task 6.3 Clustering and EU stakeholder workshop organization (lead by NTNU), the Clustering activities organized by the EC will be attended by consortium members. Moreover, the consortium will also organize a joint clustering event under the umbrella of EIT Raw materials (D6.6), with an international research focus, inviting among others, our international collaborators.

EIT Raw materials (EIT RM) and European Raw Material Alliance (ERMA) were involved in the organization and execution of the event. Originally, the clustering event was planned to be a physical event linked to an EIT RM event, such as the EIT RM Summit, stakeholder days or a thematic meeting. However, after discussions with EIT RM, it was decided to link the event to a partner visit at NTNU. Personnel from EIT RMs Innovation Hub North (the hub that NTNU belongs to) were at NTNU and presented the upcoming calls, news from the network and welcomed NTNU to ERMA. Face to face meetings between researchers and EIT RM as well as lab visits were also organized when they were at NTNU. Since the clustering event was organized in Norway, we took the advantage of the local community and invited speakers from the Scandinavian ecosystem with the aim of boosting the innovation and education in the rest of Europe by presenting the Scandinavian perspective.

Around 50 participants enrolled in the online event and 30 people joined the session virtually organized.



2. THE PROGRAMME

The event aimed at providing an overview of the actual raw materials situation in Europe, starting from the Norwegian perspective, as well as the training, education, and academia perspectives. The half-day online event wanted to gather representatives across the value chain of raw materials: Raw material suppliers, processing companies, end-users, and recyclers, along with academia, research institutes, key players of the industrial sector with best practices, and representatives from EU-funded projects with innovative ideas.

To facilitate this, a speaker from each one of the above-mentioned categories of stakeholders were invited to the event to introduce their perspectives on the topic faced.

Namely, the speakers invited to the event were the following:

- 1. Dr. Olli Salmi (managing director at Innovation Hub North and Baltic Sea at EIT RM) Representative from EIT RM / ERMA
- 2. Prof. Gabriella Tranell (NTNU), Coordinator of SisAl Pilot and SisAl slag projects, presented an overview of the SisAl approaches.
- 3. Dr. Benjamin Ravary (R&D Director Business Unit Manganese Alloys at Eramet in Norway) introduced the industrial approach.
- 4. Dr Maria Wallin (NTNU), coordinator of HydroMetEC, discussed hydrometallurgy from an education/training sector perspective.
- 5. Dr Tomas Liljenfors, founder of BRYNE a start-up based in Sweden, presented its new approach

The panel discussion at the end of the event was moderated by Mr. Anastasios Kladis. Mr. Kladis is a Mining Engineer – Metallurgist from NTUA, Greece. He holds an MSc in Mineral Economics from Nottingham University, UK, and is professionally trained in INSEAD, France, and IMD, Switzerland. Mr. Kladis is strongly involved in sourcing analysis and/or business planning in several EU projects (EnsureAl, RemovAl, AlSiCal, Crocodile, Reactiv, and SisAl Pilot). He is also consulting several companies in the industry of raw materials production on strategic business planning, strategic sourcing, product development, and M&As.

This panel discussion tried to shed light on the following topics:

- How is the recycling of secondary raw materials approached in Norway?
- How can we improve the recycling rate in Europe?
- What are the main innovation avenues in Reduce Reuse Recycle triangle, which the Raw Materials Community is working on right now?



These three key questions were also asked in the registration forms to the participants, to provide inputs to the discussion and also from the audience attending the event. The questions, of course, were not mandatory.

Below is also reported the matrix used by the moderator during the panel discussion to stimulate the debate.

	How is the recycling of secondary raw materials approached in Norway?	How can we improve the recycling rate in Europe?	What are the main innovation avenues in Reduce - Reuse - Recycle triangle, which Raw Materials Community is working on right now?	
OLLI SALMI	5. What are you doing to replicate Norway?	1. Are you happy with the results vs the money spent? Need more ideas?	3. Is recycling institutionalized enough in the EU?	
GABRIELLA TRANELL	Which is the knowledge background in Norway? Universities, Research institutes, Government agencies	2. Has today's Metallurgy reached its limits? Are Pyro - Hydro enough?	5. Have you adjusted the Curriculum accordingly?	
BENJAMIN RAVARY	4. What is the role of Symbiosis in recycling? E.g. Mo-i-Rana industrial park	3. Recycling or Upcycling? Converting recycled metals directly into alloys?	1. Is recycling becoming a part of your core business or is it just a CSR activity?	
MARIA WALLIN	2. What is the Norwegian Government's attention to secondary materials recycling? Funding programs, Initiatives	4. Who is pushing you for more performance in this topic? Industry, Society, or your scientific curiosity?	4. As a researcher, what are the skills required for increased 3Rs innovation?	
TOMAS LILJENFORS	3. What are the competitive advantages of Norway?	5. Are agile SMEs more suitable to stretch the limits of recycling?	2. What is the role of SMEs in the 3Rs' acceleration?	



3. THE INVOLVEMENT OF SISTER PROJECTS & USE OF SOCIAL MEDIA

Sister projects including SisAl slag (<u>SisAL Slag</u>) and HydroMetEC (https://www.ntnu.edu/metpro/hydrometec) contributed to boost the visibility of the clustering event, by sharing information on their social medial channels. Personal invites to the event were also sent to the participants in the respectively project. People from EIT RM as well as Benjamin Ravary from Eramet also shared information about the event on their LinkedIn profiles.

4. THE ONLINE COMMUNICATION MATERIAL

To boost the visibility of the event, CTECH in collaboration with INNEN, jointly elaborated ad hoc communication materials, containing the main information to attend the event.

4.1 Flyer



Figure 1 The clustering event flyer



4.2 Social media banners





Figure 2 The online banners

4.3 The project website: homepage, news & events page, and ad hoc page

The SisAl Pilot homepage was also enriched with a dedicated banner, on top of it, which redirected the visitors to the EVENT page before the event took place, in order to invite stakeholders to register and join the online event.

Furthermore, after the event took place, an ad hoc page was also created under the project website section "project outputs" to share the main information about the clustering event main information, context and program. On this page, it is possible also to download the presentations shown by the invited speakers.



The page can be found here https://www.sisal-pilot.eu/documents/sisal-pilot-clustering-event-6th-october-2022/ .

Below some visual examples of all the above mentioned pages, implemented on the SisAl Pilot project website, are provided.

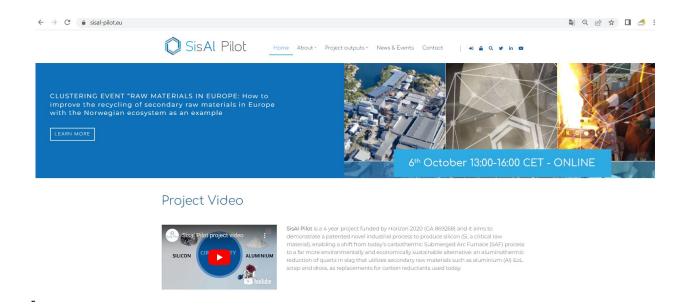


Figure 3 The online banner implemented on the Homepage



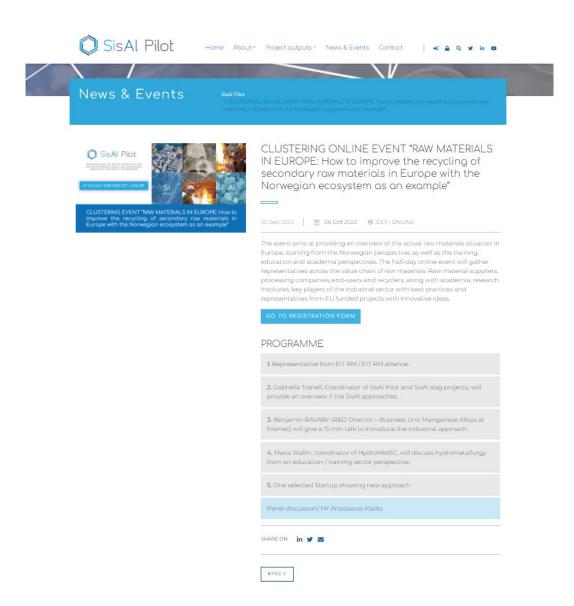


Figure 4 The News & Event page of the Clustering event





Figure 5 The Clustering event page under Project OUTPUTS on the website

4.4 THE CORALIS PROMOTION

Synergies with "CORALIS: INDUSTRIAL SYMBIOSIS in Energy Intensive Industries" were established to jointly disseminate the invitation to the SisAl Pilot Clustering event.

The main objective of CORALIS is to create pathways for the decarbonization of resource and energy-intensive sector value chains through the implementation of viable industrial symbiosis approaches



combining new business and management strategies with innovative technology-based enablers. This whole approach will be demonstrated in three real industrial areas covering different sectors, geographical dimensions, and resources, improving the knowledge basis and laying the foundations for exploiting the potential of Industrial Symbiosis in the EU process industry.

Main information about CORALIS can be found at Concept and approach - Coralis (coralis-h2020.eu)

In the following pages, it is possible to find the news about the SisAl Pilot event promoted by CORALIS on its website and social media channels, with some visual examples.

- SisAl Pilot CLUSTERING ONLINE EVENT "RAW MATERIALS IN EUROPE: How to improve the recycling of secondary raw materials in Europe with the Norwegian ecosystem as an example" - Coralis (coralish2020.eu)
- Coralis EU project | Facebook
- Retweet of SisAl Pilot Tweet



Figure 6 The joint promotion on CORALIS website



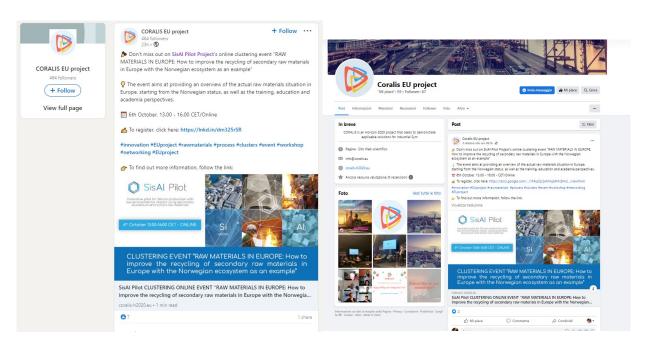


Figure 7 The CORALIS promotion on social media

4.5 The newsletter n. 5

As indicated in the Dissemination and communication project plan, every six months a newsletter is released to inform the public about the SisAl Pilot main updates. Since the issue number 5 of the newsletter was planned in October, it was decided to take advantage of the opportunity to boost the final results of the Clustering event in this letter. The newsletter can be found on the webpage <u>"Project output/Newsletters"</u>.

4.6 D&C actions implemented by SisAl Pilot and its partners

Below there is a list of the actions reported by CiaoTech and CITMAGA implemented to boost the visibility of the SisAl Pilot Clustering event.

PART NER NAME	COMMUNIC ATION CHANNEL	COMMUNICATION ACTION	TITLE OF THE ACTIVI TY	ACTION DESCRIPT ION	DATE	URL	General Public – Audienc e Size
ctech	event	organisation_of_a_ workshop	cluster ing online event with EIT RM	clustering event	2020- 10-06 00:00: 00	https://www.sisal-pilot.eu/events/clustering-event-raw-materials-in-europe-how-to-improve-the-recycling-of-secondary-raw-materials-in-europe-with-the-norwegian-ecosystem-as-an-example/	0
ctech	Innovation Place website	other	great succes s for the event	great success for the evetn	2022- 10-10 00:00: 00	https://www.innovationplace.eu/news/great-success-for-sisal-pilot-clustering-event	>10.000 general public, industri es, the scientifi c commu nity





ctech	innovation place twitter account	social_media	great succes s for	great success event	2022- 10-10 00:00:	https://twitter.com/INNOVATION_PL/status/15795062 75150598144	519
			the		00		
			event				
ctech	Pno Europe	social_media	great	great	2022-	https://www.linkedin.com/feed/update/urn:li:share:69	4264
	LinkedIn		succes	success	10-10	85271464153235456/	
	account		s for	for the	00:00:		
			the	evetn	00		
			event				
ctech	innovation	social_media	great	great	2022-	https://www.linkedin.com/feed/update/urn:li:share:69	1100
	place		succes	success	10-10	85271079875325953/	
	Linkedin		s for	for the	00:00:		
			the	evetn	00		
			event				
ctech	ciaotech	social_media	great	great	2022-	https://www.linkedin.com/feed/update/urn:li:share:69	472
	LinkedIn		succes	success	10-10	85270272408858624/	
	account		s for	for the	00:00:		
			the	event	00		
			event				



		T	1	I	1		
ctech	Twitter	social_media	great	great	2022-	https://twitter.com/SisalPilot/status/15795026116609	40
	project		succes	success	10-10	43363	
	account		s for	for the	00:00:		
			the	event	00		
			event				
ctech	project	website	great	great	2022-	https://www.sisal-pilot.eu/news/great-success-for-	0
	website		succes	success	10-10	sisal-pilot-clustering-event/	
			s for	for the	00:00:		
			the	evetn	00		
			event				
ctech	LinkedIn	social_media	great	great	2022-	https://www.linkedin.com/feed/update/urn:li:share:69	241
	project		succes	success	10-10	85266889606213634/	
	account		s for	for the	00:00:		
			the	event	00		
			event				
ctech	twitter	social_media	cluster	clustering	2022-	https://twitter.com/SisalPilot/status/15747403901458	40
	project		ing	event	09-27	<u>18625</u>	
	account		event		00:00:		
					00		
ctech	LinkedIn	social_media	sisal	sisal	2022-	https://www.linkedin.com/feed/update/urn:li:share:69	235
	project		event	clustering	09-27	80505308007686144/	
	account		online	event			



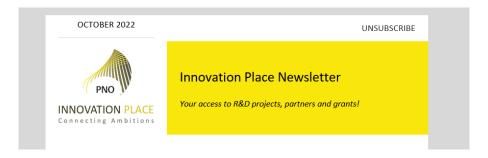
ctech	Innovation Place website	other	cluster ing sisal cluster ing event online	sisal clustering event online	00:00: 00 2022- 09-27 00:00: 00	https://www.innovationplace.eu/news/sisal-pilot-clustering-online-event-raw-materials-in-europe-how-to-improve-the-recycling-of-secondary-raw-materials-in-europe-with-the-norwegian-ecosystem-as-an-example	>10.000 general public, industri es, the scientifi c community
ctech	ciaotech LinkedIn account	social_media	promo event	promo event clustering	2022- 09-20 00:00: 00	https://www.linkedin.com/feed/update/urn:li:share:69 78015696215502848/	462
ctech	twitter project account	social_media	promo cluster ing event online	promo clustering event online	2022- 09-20 00:00: 00	https://twitter.com/SisalPilot/status/15722186890927 18593	40



ctech	project website	website	promo cluster ing event webpa ge	promo clustering event - webpage	2022- 09-20 00:00: 00	https://www.sisal-pilot.eu/events/clustering-event-raw-materials-in-europe-how-to-improve-the-recycling-of-secondary-raw-materials-in-europe-with-the-norwegian-ecosystem-as-an-example/	0
ctech	LinkedIn project profile	social_media	promo online event - reshar e from accou nt	promo online event - reshare project account	2022- 09-20 00:00: 00	https://www.linkedin.com/feed/update/urn:li:share:69 77969249931653120/	17
ctech	LinkedIn project account	social_media	online cluster ing event promo	online clustering event promo	2022- 09-20 00:00: 00	https://www.linkedin.com/feed/update/urn:li:share:69 77968711404015616/	231
itmati	136_CITMAg a Linkedin	social_media	Linked in post	Clusterin g event of SisAl	2022- 09-26	https://www.linkedin.com/posts/citmaga_clustering-online-event-raw-materials-in-activity-6980062006062006272-	350



		Pilot	00:00:	L2Y9?utm_source=share&utm_medium=member_desk	
		Project	00	top	l
		with EIT			l
		RawMate			l
		rials			ļ



SisAl Pilot clustering online event "Raw materials in Europe: how to improve the recycling of secondary raw materials in Europe with the Norwegian ecosystem as an example"

The <u>SisAlPilot</u> and <u>SisAl slag</u> project partners are glad to invite you to the SisAl clustering event virtually hosted by NTNU on October 6th. The event aims at providing an overview of the actual raw materials situation in Europe, starting from the Norwegian perspective, as well as the training, education and academia perspectives. The half-day online event will gather representatives across the value chain of raw materials: Raw material suppliers, processing companies, end-users and recyclers, along with academia, research institutes, key players of the industrial sector with best practices and representatives from EU funded projects with innovative ideas. <u>GO TO REGISTRATION FORM</u> and register for free, don't miss the chance to share your view on recycling raw materials in Europe!

CONTACT US

Figure 8 The CiaoTech PNO Innovation place newsletter



Figure 9 The Clustering event promotion on social and corporate channels & websites

