TÜBİTAK
Uluslararası İşbirliği Daire Başkanlığı

Ufuk Avrupa Programı
Dijital, Endüstri ve Uzay Kümesi
Endüstri Alanı Ortaklıkları

Dr. Hale AY
Ulusal İrtibat Noktası

17.10.2024

Ufuk Avrupa Programı

Horizon Europe

Çözüm gerektiren güçlüklerin merkezde olduğu yaklaşımlar birlikte izleniyor

Nitelikli Bilgi, Nitelikli İnsan

Çözüm Gerektiren Güçlükler

Birlikte Geliştirme (Co-Creation)

Bilimsel Mükemmeliyet

- Avrupa Araştırma Konseyi
- MSCA Eylemleri
- Altyapılar

Küresel Sorunlar ve Endüstriyel Rekabet

- Sağlık
- Kültür, yaratıcılık ve kapsayıcı toplumlar
- Sivil güvenlik
- Dijital, endüstri ve uzay
- İklim, enerji ve mobilite
- Gıda, biyoekonomi, doğal kaynaklar, tarım ve Çevre

Ortak Araştırma Merkezi

Yenilikçi Avrupa

- Avrupa Yenilik Konseyi
- Avrupa Yenilik Ekosistemi
- Avrupa Teknoloji ve Yenilik Enstitüsü

Katılımın Yaygınlaştırılması ve ERA'nın Güçlendirilmesi

- Mükemmeliyetin Paylaşımı ve Yayılımı
- Avrupa Araştırma & Yenilik Sisteminin Reformu ve Geliştirilmesi

Küme 4: Dijital, Endüstri ve Uzay

Genel Amacı

AB endüstrisinin rekabet üstünlüğünü ve özerkliğini garantiye almak için endüstrinin daha fazla dijitalleşmesini sağlamak, iklim-nötr, döngüsel ve temiz endüstriyi teşvik etmek

Desteklenecek Konular

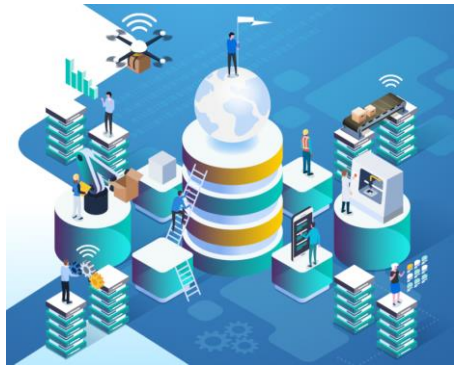
- Dijital kilit teknolojiler
- Veri, yapay zeka ve robotik
- Yeni nesil internet
- Uydu haberleşmesi
- Yer gözlemi
- Uzay ulaşımı
- İmalat teknolojileri
- İleri malzemeler
- Döngüsel endüstriler
- Düşük karbonlu ve temiz endüstriler
- Ham maddeler

Bütçe

- **15,3 Milyar Avro (%16)**

İlgili UİN İletişim

- **Dr. Hale AY** → **ENDÜSTRİ**
- **Dr. Özlem GEZİCİ KOÇ** → **DİJİTAL ve UZAY**
- **H. Burak TİFTİK** → **DİJİTAL**
- **Küme 4 eposta: ncpdis@tubitak.gov.tr**



"Küme 4: Dijital, Endüstri ve Uzay" Hedefleri

ENDÜSTRİ	1. İklim nötr, döngüsel ve dijitalleştirilmiş üretim 2. Dayanıklı endüstri için kilit stratejik değer zincirlerinde artan özerklik
DİJİTAL	3. Dünya lideri veri ve bilgi işlem teknolojileri 4. Rekabet ve yeşil mutabakata uygunluk için dijital ve gelişmekte olan teknolojiler
UZAY	5. Küresel uzay-tabanlı altyapıların, hizmetlerin, uygulamaların ve verilerin geliştirilmesinde, konuşlandırılmasında ve kullanılmasında açık stratejik özerklik
DİJİTAL	6. Dijital ve endüstriyel teknolojilerin insan merkezli ve etik gelişimi

Küme 4 – Endüstri Alanı Hedefleri, Hedef 1

Hedef 1: "İklim nötr, döngüsel ve dijitalleştirilmiş üretim"

- Manufacturing Industry
- Energy Intensive Process Industries
- Accelerating disruptive change in construction

https://ec.europa.eu/digital-single-market/en/news/info-session-horizon-2020-artificial-intelligence-manufacturing

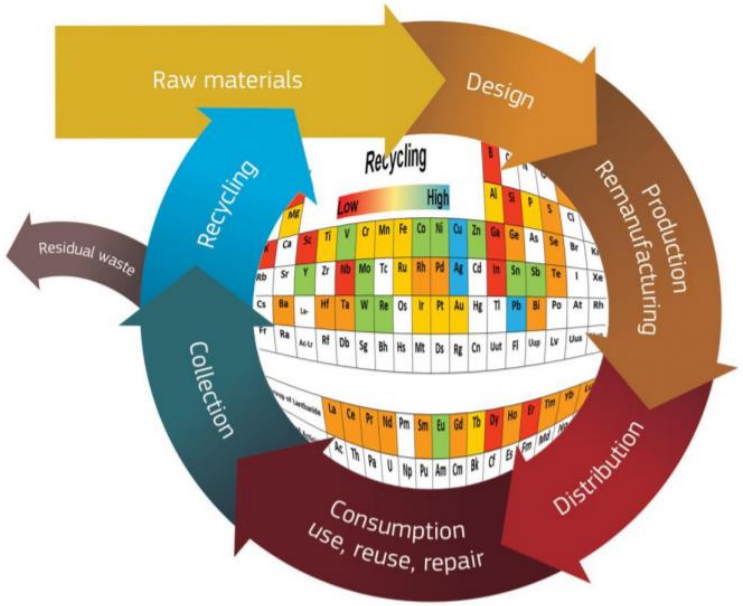
JRC Reference Report, Best Available Techniques (BAT) Reference Document for Iron and Steel Production Industrial Emissions Directive 2010/75/EU (Integrated Pollution Prevention and) Control

JRC Science for Policy Report: Digital Transformation in Transport, Construction, Energy, Government and Public Administration

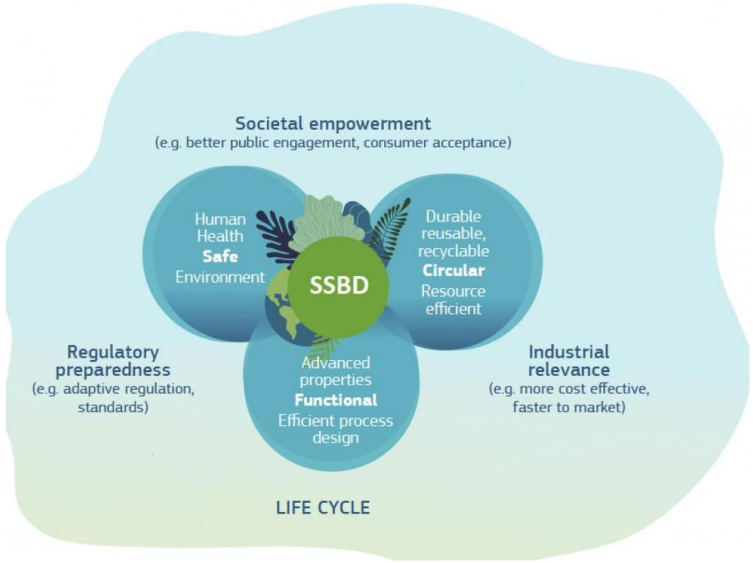
Küme 4 – Endüstri Alanı Hedefleri, Hedef 2

Hedef 2: "Dayanıklı endüstri için kilit stratejik değer zincirlerinde artan özerklik"

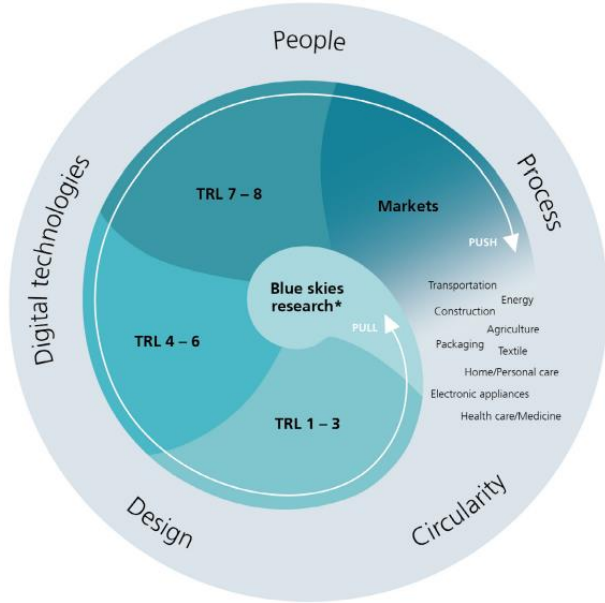
- Raw Materials
- Safe and Sustainable by Design Chemicals and Materials
- Strategic innovation markets driven by advanced materials



JRC Science for Policy Report, Critical raw materials and the circular economy, December 2017



https://joint-research-centre.ec.europa.eu/jrc-news/contributing-greener-eu-safe-and-sustainable-nanomaterials-design-stage-2021-04-19_en



MATERIALS 2030 MANIFESTO Systemic Approach of Advanced Materials for Prosperity – A 2030 Perspective

Ufuk Avrupa Programı Ortaklıkları

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 2: Culture, creativity, inclusive societies	CLUSTER 4: Digital, industry and space	CLUSTER 5: Climate, energy and mobility	CLUSTER 6: Food, bioeconomy, natural resources, agriculture and environment
Innovative Health Initiative	Resilient Cultural Heritage*	Chips (formerly KDT)	Clean Hydrogen	Circular Bio-based Europe
Global Health Partnership	Social Transformations and Resilience*	Smart Networks & Services	Clean Aviation	R&I in the Mediterranean Area (PRIMA, Art. 185)**
Transformation of Health and Care Systems		High Performance Computing	Single European Sky ATM Research 3	Biodiversa+
Chemicals Risk Assessment		European Metrology (Art. 185)	Europe's Rail	Climate Neutral, Sustainable & Productive Blue Economy
ERA for Health		AI-Data-Robotics	Connected, Cooperative and Automated Mobility (CCAM)	Water4All
Rare Diseases*		Photonics	Batt4EU	Animal Health and Welfare
One-Health Anti Microbial Resistance*		Made in Europe	Zero-emission waterborne transport	Accelerating Farming Systems Transitions
Personalised Medicine		Clean Steel – Low-Carbon Steelmaking	Zero-emission road transport	Agriculture of Data*
Pandemic Preparedness*		Processes4Planet	Built4People	Safe and Sustainable Food System*
Brain Health*		Globally Competitive Space Systems*	Solar Photovoltaics*	Forests and Forestry for a sustainable Future*
		Innovative Materials for EU (I AM for EU)*	Clean Energy Transition	
		Virtual Worlds*	Driving Urban Transitions	
		Textiles of the Future*		
		Raw Materials for the Green and Digital Transition*		

PILLAR III – Innovative Europe

EIT	EUROPEAN INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
Digital	
Food	
Health	
Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creativity*	
Water, Marine and Maritime Sectors and Ecosystem*	

Cross - PILLARS I and II

European Open Science Cloud

- Institutionalised Partnerships (Art. 185/7)
- Institutionalised Partnerships / EIT KICs
- Co-programmed
- Co-funded
- Proposed new candidate European Partnerships under the Horizon Europe Plan 2025-2027

** Partnership not yet launched*
*** Direct continuation of a H2020 partnership*

Kaynak: Performance of European Partnerships
Biennial Monitoring Report 2024 on partnerships in Horizon Europe

Ufuk Avrupa Programı Ortaklıkları

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 2: Culture, creativity, inclusive societies	CLUSTER 4: Digital, industry and space	CLUSTER 5: Climate, energy and mobility	CLUSTER 6: Food, bioeconomy, natural resources, agriculture and environment
Innovative Health Initiative	Resilient Cultural Heritage*	Chips (formerly KDT)	Clean Hydrogen	Circular Bio-based Europe
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Personalised Medicine		★ Clean Steel – Low-Carbon Steelmaking	Zero-emission road transport	Agriculture of Data*
Pandemic Preparedness*		★ Processes4Planet	Built4People	Safe and Sustainable Food System*
Brain Health*		Globally Competitive Space Systems*	Solar Photovoltaics*	Forests and Forestry for a sustainable Future*
		★ Innovative Materials for EU (I AM for EU)*	Clean Energy Transition	
		Virtual Worlds*	Driving Urban Transitions	
		★ Textiles of the Future*		
		★ Raw Materials for the Green and Digital Transition*		

★ Industry Area Partnerships

PILLAR III – Innovative Europe

EIT	EUROPEAN INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
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Food	
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Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creativity*	
Water, Marine and Maritime Sectors and Ecosystem*	

Cross - PILLARS I and II

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- Institutionalised Partnerships (Art. 185/7)
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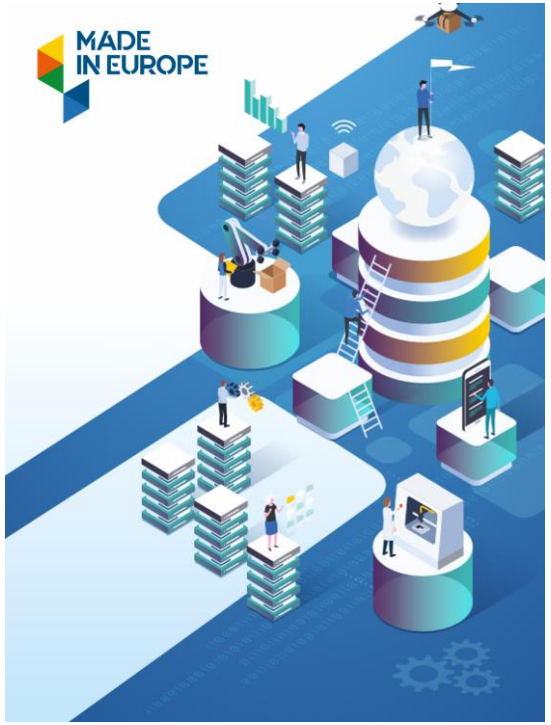
Kaynak: Performance of European Partnerships
Biennial Monitoring Report 2024 on partnerships in Horizon Europe

"Made in Europe" Ortak-Programlama Ortaklığı

Manufacturing community mobilised by EFFRA

European Commission

Made in Europe Partnership



A New Industrial Strategy for Europe (EU Policy):

1. European Leadership & manufacturing excellence

European Green Deal (EU Policy):

2. Circular and climate-neutral manufacturing

Made in Europe General Objectives

Europe fit for the digital age (EU Policy):

3. Digital transformation of manufacturing industry

Economy that works for people (EU Policy):

4. Attractive value-added manufacturing jobs

Made in Europe Partnership Strategic Research and Innovation Agenda, https://effra.eu/wp-content/uploads/2023/12/made_in_europe-sria.pdf

"Made in Europe" Ortak-Programlama Ortaklığı

Specific Objectives	Research & Innovation Objectives
1. Efficient, responsive and smart factories and supply chains	1. Data 'highways' and data spaces in support of smart and real-time connected factories in dynamic and robust value networks 2. Scalable, reconfigurable and flexible first-time right manufacturing 3. Zero-defect and zero-down-time high precision manufacturing, including predictive quality and non-destructive inspection methods 4. Artificial intelligence for productive, excellent, robust and agile manufacturing chains 5. Advanced manufacturing processes for smart and complex products 6. High precision manufacturing for miniaturisation and functional integration
2. Circular products & Climate-neutral manufacturing	1. Ultra-efficient, low energy and carbon-neutral manufacturing 2. De-manufacturing, re-manufacturing and recycling technologies for circular economy 3. Manufacturing with new and substitute materials 4. Virtual end-to-end life-cycle engineering and manufacturing from product to production lines, factories, and networks 5. Digital platforms and data management for circular product and production-systems life-cycles
3. New integrated business, product-service and production approaches; new use models	1. Collaborative product-service engineering for costumer driven manufacturing value networks 2. Manufacturing processes and approaches near to customers or consumers 3. Transparency, trust and data & IP integrity, open systems and cybersecurity along the product and manufacturing life-cycle
4. Human-centered and human-driven manufacturing innovation	1. Digital platforms and engineering tools supporting creativity and productivity of R&D processes 2. Advanced human-device interaction 3. Human & technology complementarity and excellence in manufacturing 4. Manufacturing Innovation and change management 5. Technology validation and migration paths towards full industrial deployment of advanced manufacturing technologies by SMEs

Made in Europe Partnership Strategic Research and Innovation Agenda, https://effra.eu/wp-content/uploads/2023/12/made_in_europe-sria.pdf

"Made in Europe" Ortak-Programlama Ortaklığı

EFFRA
EUROPEAN FACTORIES OF THE FUTURE RESEARCH ASSOCIATION
Manufacturing community mobilised by EFFRA

Türkiye'den EFFRA'ya üye olan kurum/kuruluşlar

- Arçelik
- Coşkunöz Kalıp Makine
- Ford Otosan
- Robo Otomasyon
- Sabancı Üniversitesi
- Teknopar
- Türkiye Metal Sanayicileri Sendikası
- WiserSense

EFFRA üye listesine https://www.effra.eu/members/ linkinden ulaşabilirsiniz.

Made in Europe Ortaklığı kapsamında açılan 2021-2024 yılı çağrılarında ülkemizden paydaşlarımızın yer aldığı **19 farklı projede 9,55 Milyon Avroluk** proje bütçesine ulaşılmıştır.

AI-PRISM: Teknopar Endüstriyel Otomasyon San. ve Tic. A.Ş. ve Silverline Endüstri ve Tic. A.Ş.

ZDZW: Simularge Bilisim ve Mühendislik Teknolojileri A.Ş., Siemens San. ve Tic. A.Ş. ve Arçelik A.Ş.

OPeraTIC: Arçelik A.Ş.

VITAL: Arçelik A.Ş., Farplas Otomotiv A.Ş. ve Tofaş Türk Otomobil Fabrikası A.Ş.

Circular TwAIn: Teknopar Endüstriyel Otomasyon San. ve Tic. A.Ş. ve Socar Türkiye Araştırma Geliştirme ve Inovasyon A.Ş.

SYNTECS: Farplas Otomotiv A.Ş.

HARTU: Tofaş Türk Otomobil Fabrikası A.Ş.

AUTO-TWIN: KOÇ Üniversitesi

DiCiM: Arçelik A.Ş.

FLASH: Tofaş Türk Otomobil Fabrikası A.Ş.

CREDIT: Farplas Otomotiv A.Ş., Profen İletişim Teknolojileri ve Hizmetleri Sanayi Ticaret A.Ş. ve Türk Havacılık Uzay Sanayii A.Ş.

RESTORE: Navtek Denizcilik Teknolojileri A.Ş.

RENEE: Arçelik A.Ş.

rEUman: Arçelik A.Ş.

MAASive: Arçelik A.Ş., İlpea Plastik ve Kauçuk Ürünleri San. ve Tic. Ltd. Şti. ve Smartopt Bilişim Teknolojileri A.Ş.

Tec4MaaSEs: Smartopt Bilişim Teknolojileri A.Ş., Arçelik A.Ş. ve Karel Elektronik Sanayi ve Ticaret A.Ş.

DMaaST: IND Yazilim Bilisim Teknolojileri San. ve Tic. A.S.

DIAMETER: Sabancı Üniversitesi, TUSAŞ-Türk Havacılık ve Uzay Sanayii A.Ş., Coşkunöz Kalıp Makina San. ve Tic. A.Ş.

ENCIRCLE: Arçelik A.Ş.

"Processes4Planet" Ortak-Programlama Ortaklığı

European Cross-Sectoral association

European Commission

Processes4Planet Partnership

Processes4Planet'in Hedefleri

1. Climate neutrality
   Net-zero emissions

2. Circularity
   Near zero landfilling and
   near zero water discharge

3. Competitive EU
   process industries

"Processes4Planet" Ortak-Programlama Ortaklığı

Innovation Areas	Innovation Programmes	
1. Integration of renewable energy and circular feedstocks as energy source	1a. Integration of renewable heat and electricity 1b. Integrating circular carbon into energy applications	1c. Hybrid fuel transition technologies 1d. Flexibility and demand response
2. Heat reuse	2a. Advanced heat reuse	
3. Electirification of thermal processes	3a. Heat pumps	3b. Electricity-based heating technologies
4. Electrically-driven processes	4a. Electrochemical conversion	4b. Electrically driven separation
5. Hydrogen integration	5a. Alternative hydrogen production routes 5b. Using hydrogen in industrial processes	5c. Hydrogen storage
6. CO_2 capture for utilisation	6a. Flexible CO_2 capture and purification technologies	
7. CO_2 utilization in minerals	7a. CO_2 utilisation in concrete production	7b. CO_2 and CO mineralisation to produce building materials
8. CO_2/CO utilisation in chemicals and fuels	8a. Artificial photosynthesis 8b. Catalytic conversion of CO_2 to chemicals/fuels	8c. Utilisation of CO_2 and CO as building block in polymers 8d. Utilisation of CO to chemicals/fuels
9. Energy and resource efficiency	9a. Next-gen catalysis	9b. Breakthrough efficiency improvement
10. Circularity of materials	10a. Innovative materials of the process industries 10b. Inherent recyclability of materials	10c. Upgrading secondary resources 10d. Wastewater valorisation
11. Industrial-urban symbiosis	11a. Demonstration of Industrial-Urban Symbiosis	
12. Circular regions	12a. European Community of Practice	12b. Development of Hubs for Circularity
13. Digitalisation	13a. Digital materials design 13b. Digital process development and engineering 13c. Digital plant operation	13d. Intelligent material and equipment monitoring 13e. Autonomous integrated supply chain management 13f. Digitalisation of industrial-urban symbiosis
14. Non-technological aspects	14a. Integration of non-technological aspects in calls	14b. Human resources, skills and labour market

Processes4Planet Partnership Strategic Research and Innovation Agenda, https://www.aspire2050.eu/sites/default/files/users/user85/p4planet_07.06.2022._final.pdf

"Processes4Planet" Ortak-Programlama Ortaklığı

European Cross-Sectoral association

Processes4Planet Ortaklığı kapsamında açılan 2021-2024 yılı çağrılarında ülkemizden paydaşlarımızın yer aldığı **8 farklı projede 8,97 Milyon Avroluk** proje bütçesine ulaşılmıştır.

PLASTICE: Korteks Mensucat San. ve Tic. A.Ş. ve Sun Tekstil San. ve Tic. A.Ş.

FLEXIndustries: Ford Otomotiv San. A.Ş., Türkiye Bilimsel ve Teknolojik Araştırma Kurumu, Sakarya Elektrik Dağıtım Şirketi, Mutlu Akü ve Malz. San. A.Ş. ve Türkiye Petrol Rafinerileri A.Ş.

IS2H4C: İstanbul Maden ve Metaller İhracatçı Birlikleri, Türkiye Petrol Rafinerileri A.Ş. ve Arçelik A.Ş.:

RESURGENCE: Organik Kimya Sanayi ve Ticaret A.Ş.

StreamSTEP: Teknopar Bilişim

ICO2NIC: Türkiye Petrol Rafinerileri A.Ş.

United Circles: Baştaş Başkent Çimento San. ve Tic. A.Ş., Ekodenge Mühendislik Mimarlık Danışmanlık Ticaret A.Ş., Ensensei Mühendislik Danışmanlık Limited Şirketi, Intract Inovasyon Danışmanlık Limited Şirketi, Minova Proses Madencilik Limited Şirketi, Tepe Betopan Yapı Malzemeleri San. ve Tic. A.Ş., İnşaat Malzemesi Sanayicileri Derneği

REPAM: TUSAŞ-Türk Havacılık ve Uzay Sanayii A.Ş.

Türkiye'den A.SPIRE'a üye olan kurum/kuruluşlar

- Brisa Bridgestone
- Hayat Kimya
- Hitit Üniversitesi
- İstanbul Kimyevi Maddeler ve Mamulleri İhracatçıları Birliği
- Sabancı Üniversitesi
- SOCAR Türkiye
- Teknopar
- Tüpraş

A.SPIRE üye listesine https://www.aspire2050.eu/aspire/members linkinden ulaşabilirsiniz.

"Clean Steel" Ortak-Programlama Ortaklığı

ESTEP

European Steel Technology Platform

+

European Commission

European Commission

→

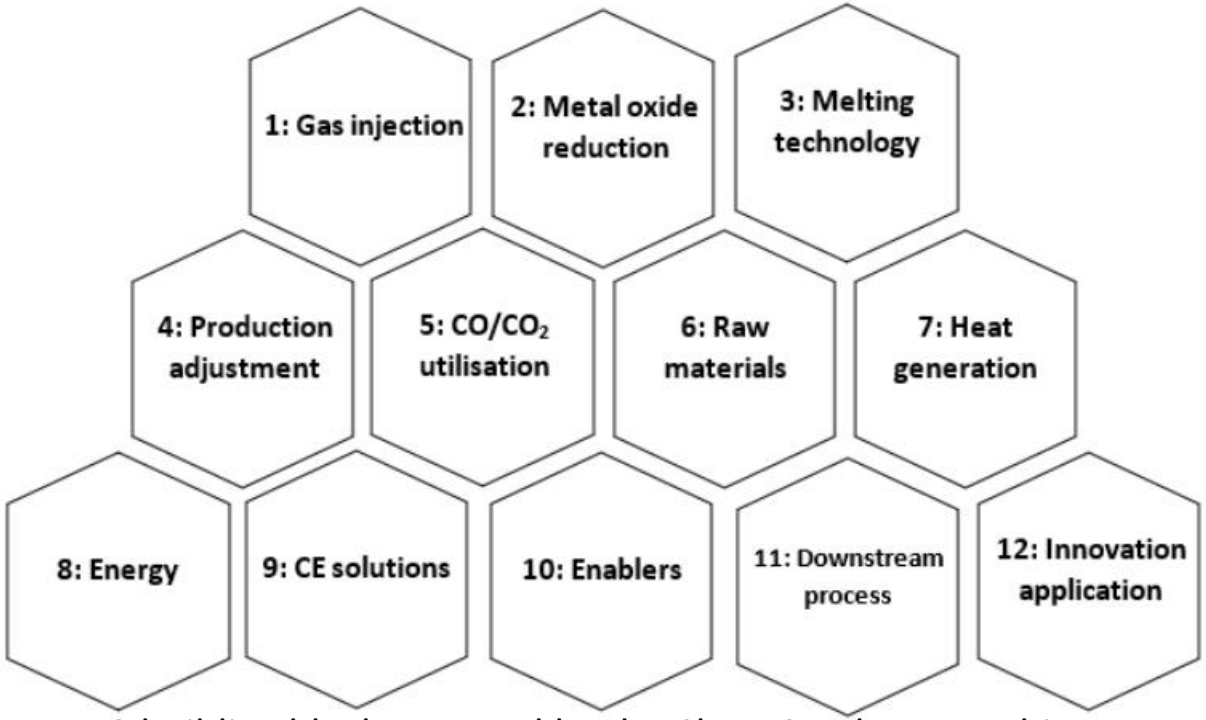
CSP

The Clean Steel Partnership

General Objective

Develop technologies at TRL8 to reduce CO2 emissions stemming from EU steel production by 80-95% compared to 1990 levels by 2050, ultimately leading to climate neutrality

ESTEP üye listesine https://www.estep.eu/members linkinden ulaşabilirsiniz.



12 building blocks covered by the Clean Steel Partnership

Clean Steel Partnership Strategic Research and Innovation Agenda, https://www.estep.eu/assets/CSP/CSP_SRIA_Oct2021_clean.pdf

"Clean Steel" Ortak-Programlama Ortaklığı

Specific Objectives	Operational Objectives
1. Enabling steel production through carbon direct avoidance (CDA) technologies at a demonstration scale	1. Replacing carbon by renewable energy 2. Development of H_2-based reduction and/or melting processes 3. Electrolytic reduction
2. Fostering smart carbon usage (SCU-Carbon capture) technologies in steel making routes at a demonstration scale, thus cutting CO_2 emissions from burning fossil fuels in the existing steel production routes	1. Improving process integration with reduced use of carbon (e.g. gas injection in BF), upstream and downstream 2. Increasing the use of non-fossil carbon 3. Capturing CO_2 for CCU and/or CCS 4. Conditioning of metallurgical gases (containing CO_2, CO, CH_4, etc.) to meet specifications to finally produce chemical feedstock/alternative fuels
3. Developing deployable technologies to improve energy and resource efficiency (SCU - Process Integration)	1. Increasing the use of prereduced iron carriers 2. Developing technologies to reduce the energy required to produce steel
4. Increasing the recycling of steel scrap and residues, thus improving smart resources usage and further supporting a circular economy model in EU	1. Enhancing the recycling and reuse of industrial residues of the steel production process 2. Enhancing the recycling of steel scrap
5. Demonstrating clean steel breakthrough technologies contributing to climate-neutral steelmaking	1. Achieving TRL 8 by 2030 in most of the technology building blocks funded by the Partnership 2. Demonstrating clean steel breakthrough technologies by 2030 that enable at least a reduction in GHG emission compared to 1990 levels for similar plants
6. Strengthening the global competitiveness of the EU steel industry in line with the EU industrial strategy for steel	1. Creating a new market for 'clean steel' products 2. Contributing to the EU's efforts towards ensuring growth and jobs with long-term stability 3. Establishing EU steel industry as a leader in low-carbon steel and ensuring standardization and global market uptake of successful technologies developed in the EU 4. Fostering R&D collaboration between EU companies and science in the clean steel value chains 5. Upskilling steel workforce

Clean Steel Partnership Strategic Research and Innovation Agenda, https://www.estep.eu/assets/CSP/CSP_SRIA_Oct2021_clean.pdf

YENİ ORTAKLIK
"Innovative Advanced Materials for Europe (IAM4EU)" Ortak-Programlama Ortaklığı

The Innovative Advanced Materials Initiative + **European Commission** → **Innovative Advanced Materials for Europe (IAM4EU)**

Advanced Materials?

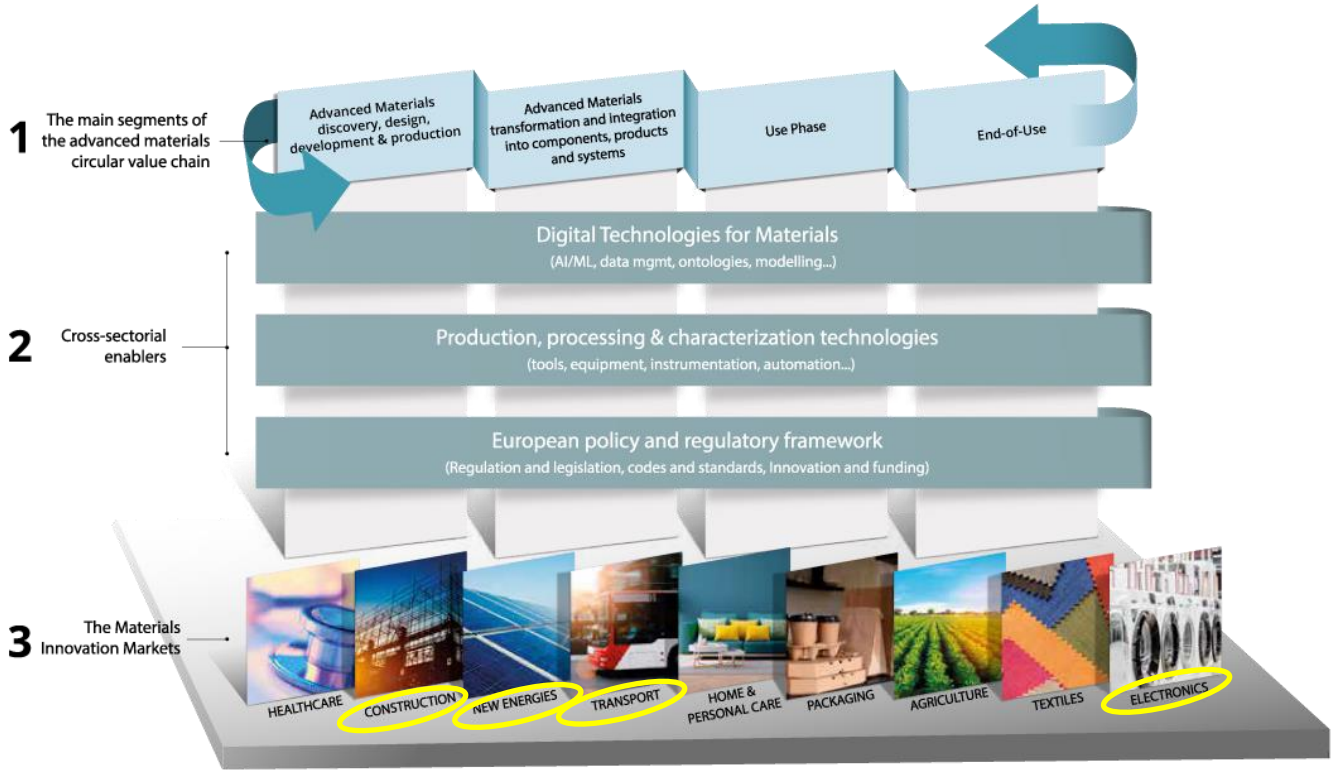
★ ***Intentionally designed*** and engineered materials to have [1]

- ***new or enhanced properties***, and/or
- ***targeted or enhanced structural features***

with the objective to achieve specific or improved functional performance

★ Advanced materials include both [1]

- ***new emerging*** manufactured materials, and
- materials that are ***manufactured from traditional materials***



European Strategic Agenda for Advanced Materials, Areas of Intervention, https://www.ami2030.eu/wp-content/uploads/2023/04/Ami2030-Dossier-2.pdf

[1] https://one.oecd.org/document/ENV/CBC/MONO(2022)29/en/pdf

IAM4EU Partnership Research&Innovation Priorities

Bu sayfadaki bilgiler 19 Eylül 2024 tarihinde gerçekleştirilen 'IAM4EU's SRIA Validation' etkinliğindeki sunumdan alınmıştır.

INNOVATIVE ADVANCED MATERIALS AND ASSOCIATED TECHNOLOGIES

P#1 - CRM-free/lean and efficient catalysts for energy conversion and CO2 reduction
P#2 - High-conductivity and durable membranes for efficient H2 production and conversion
P#3 - Innovative concepts, designs & components for efficient H2 and thermal energy storage
P#4 - CRM-free/lean magnetic phases for high-performance permanent magnets in circular value chains
P#5 - Innovative electrodes, electrolytes, binders and separators for electrochemical energy storage.
P#6 - Responsive IAMs and smart surfaces & interfaces for multifunctional components & products
P#7 - Innovative surfaces, interfaces and composites for lightweight, durable and sustainable structural systems
P#8 - IAMs to reduce use of CRM and other environmentally harmful materials in electronic devices and their manufacturing processes
P#9 - IAMs for energy efficient, multi-functional photonic and optoelectronic and quantum technologies
P#10 - IAMS based on (Design for) recyclable polymers/polymeric composites
P#11 - IAMS based on PFAS alternatives

CROSS-ENABLING TOOLS AND METHODOLOGIES

P#12 - Fair and semantic interoperable digital materials data space
P#13 - Predicting life cycle of materials
P#14 - Valid test methods supporting the implementation of SSbD
P#15 - Data management & curation for efficient SSbD

ECOSYSTEM ENABLERS AND SYNERGIES

P#16 - New business models
P#17 – Augment by an 'incentive system'
P#18 - Synergy with the "advanced materials academy"
P#19 - Networking and widespread use of technology infrastructures
P#20 - LRI, OITB and MAP integration
P#21 - Contribution to further development of standards & norms

IAM4EU's SRIA Validation workshop, SEPT. 19, 2024 - 09:00-13:00 - ONLINE MEETING
https://www.iam-i.eu/wp-content/uploads/2024/09/SRIA-validation-workshop_final.pdf

YENİ ORTAKLIK
"Textiles of the Future" Ortak-Programlama Ortaklığı

European Technology Platform for the Future of Textiles and Clothing (Textile ETP)

+

European Commission

European Commission

→

Textiles of the Future Partnership

Vision for 2030

The vision and central objective of the Textiles of the Future Partnership

> The development and demonstration of new **technologies** and innovative **business models** for competitive **manufacturing** of safe and sustainable textile **products** (and related services) made from low-impact functional **materials** and by clean and digitally connected **processes** in regional, circular and fully traceable **supply chains** for **quality jobs, industrial competitiveness & responsible consumption in Europe.**

https://textile-platform.eu/news/textile-etp-unveils-the-strategic-research-and-innovation-agenda-for-textiles-of-the-future-european-partnership

Textiles of the Future Strategic Research and Innovation Agenda, https://cms.extranet.textile-platform.eu/uploads/Final_Draft_SRIA_90cfe269e8.pdf

YENİ ORTAKLIK
"Textiles of the Future" Ortak-Programlama Ortaklığı

Textiles of the Future Partnership Research and Innovation Priorities

Priority area I
Sustainable Materials & Clean Processes

- Strategic Topic 1: Sustainable bio-based feedstock
- Strategic Topic 2: Sustainable fibres
- Strategic Topic 3: Sustainable textile chemistry
- Strategic Topic 4: Resource efficient processes
- Strategic Topic 5: Efficient end-of-life sorting, separation & recycling

Priority area II
Digital Supply Chains & New Business Models

- Strategic Topic 6: Digitalisation of the textile value chain
- Strategic Topic 7: Sustainability & Circular Data Management
- Strategic Topic 8: Design for sustainability & circularity
- Strategic Topic 9: Circular business models & value-added customer and end-user services

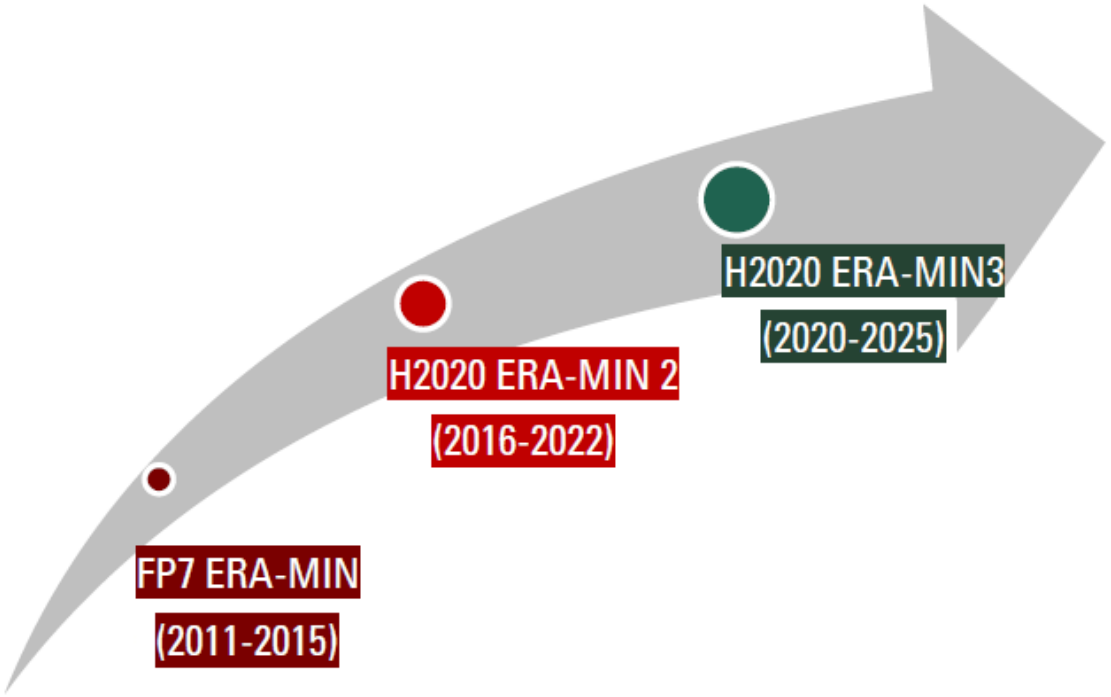
Priority area III
Advanced Manufacturing & High-performance Textiles

- Strategic Topic 10: Automated and AI-supported smart manufacturing
- Strategic Topic 11: On demand digital and networked manufacturing
- Strategic Topic 12: Safe & sustainable materials for technical applications
- Strategic Topic 13: (Multi)functional materials for technical applications

Textiles of the Future Strategic Research and Innovation Agenda,
https://cms.extranet.textile-platform.eu/uploads/Final_Draft_SRIA_90cfe269e8.pdf

YENİ ORTAKLIK
"Raw Materials for the Green and Digital Transition" Ortak-Fonlama Ortaklığı

The Partnership builds on the experience of the existing ERA-NET ERA-MIN3 (2020–2025) and the experience gained during the implementation of its predecessors ERA-MIN2 (2016–2022) and ERAMIN (2011–2015).



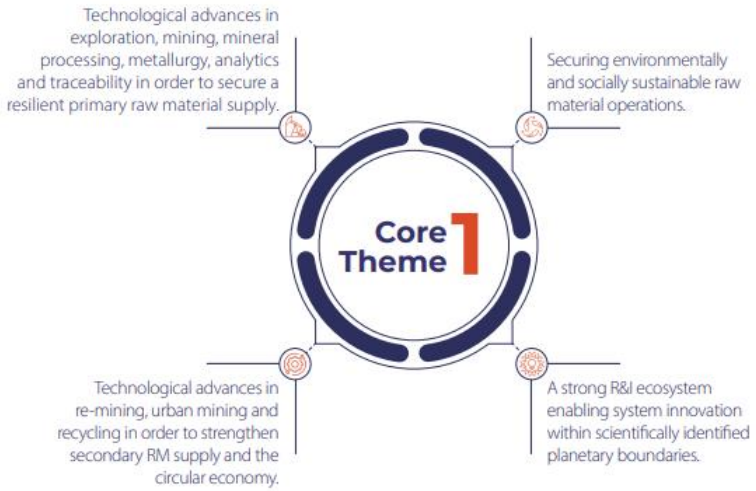
Beyond 2025 - Co-funded European partnership on Raw materials for the Green and Digital Transition

The overarching **mission of the Partnership** is to enable the sustainable supply and use of Raw Materials for the green and digital transition, through a holistic perspective that covers the whole valuechain with a strong emphasis on circular economy by building the research and innovation system and network mainly through funding.

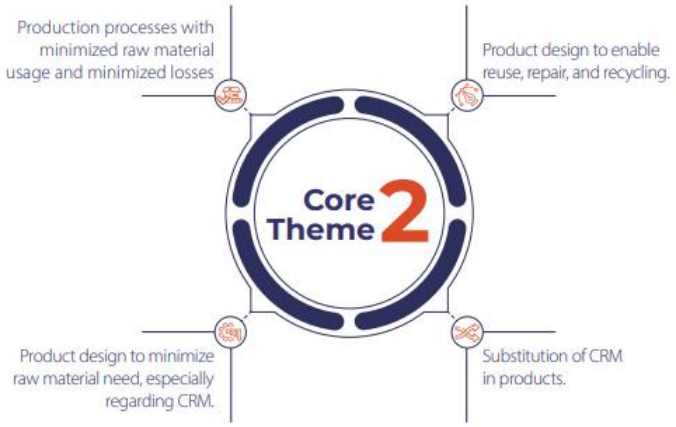
Strategic Research & Innovation Agenda (SRIA) on Raw Materials, https://www.era-min.eu/sites/default/files/docs/eramin_sria.pdf

YENİ ORTAKLIK
"Raw Materials for the Green and Digital Transition" Ortak-Fonlama Ortaklığı

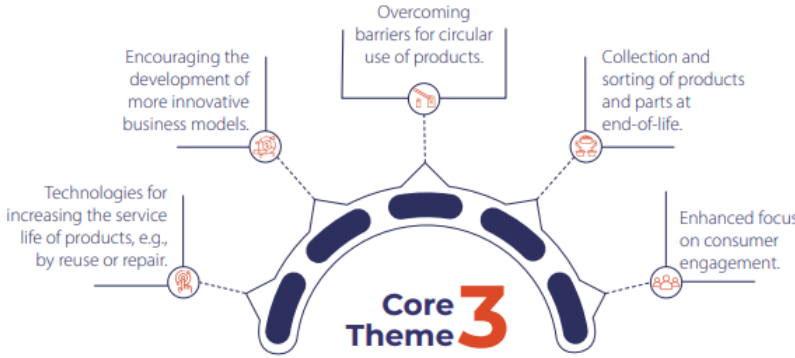
Core Theme 1
Resilient primary and secondary raw materials supply



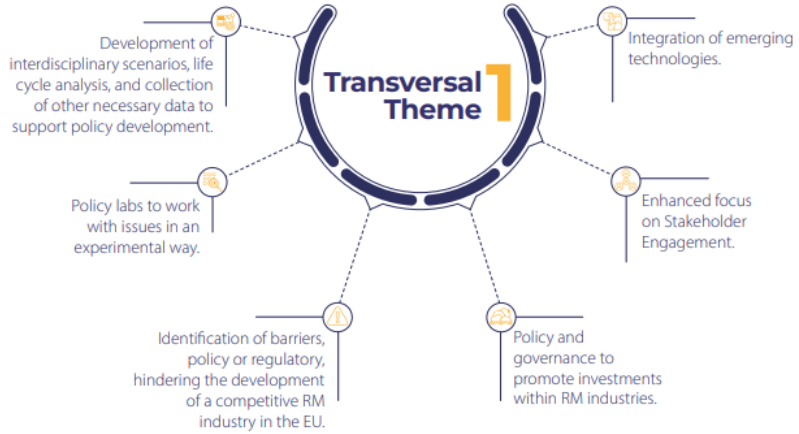
Core Theme 2
Efficient use of raw materials in design and production



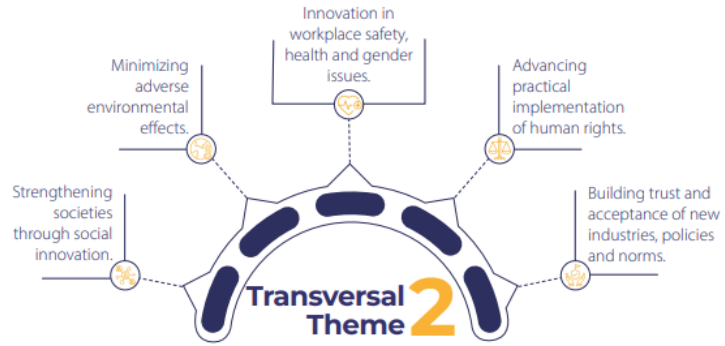
Core Theme 3
Sustainable use and reuse of products



Transversal Theme 1
Effective policy development and governance



Transversal Theme 2
Maximizing societal benefits



Transversal Theme 3
World-class innovation capacity

Strategic Research & Innovation Agenda (SRIA) on Raw Materials, https://www.era-min.eu/sites/default/files/docs/eramin_sria.pdf

Küme 4 Endüstri Alanı 2021 Yılı Çağrılarındaki Başarılarımız

Ülkemizden 17 Farklı Projede Yer Alan 32 Proje Ortağına Toplam 7.9 Milyon Avro Hibe

- **Teknopar Endüstriyel Otomasyon San. ve Tic. A.Ş.** ve **Silverline Endüstri ve Tic. A.Ş.**: AI Powered human-centred Robot Interactions for Smart Manufacturing
- **Simularge Bilisim ve Mühendislik Teknolojileri A.Ş.**, **Siemens San. ve Tic. A.Ş.** ve **Arçelik A.Ş.**: Non-Destructive Inspection Services for Digitally Enhanced Zero Waste Manufacturing
- **Arçelik A.Ş.**: Boosting the adoption of Ultrashort Pulsed Laser large scale structuring with an agile, dexterous and efficient manufacturing platform
- **Arçelik A.Ş.**, **Farplas Otomotiv A.Ş.** ve **Tofaş Türk Otomobil Fabrikası A.Ş.**: InnoVatIve processing Technologies for bio-based foAmed thermopLastics
- **Teknopar Endüstriyel Otomasyon San. ve Tic. A.Ş.** ve **Socar Türkiye Araştırma Geliştirme ve Inovasyon A.Ş.**:AI Platform for Integrated Sustainable and Circular Manufacturing
- **Hidromek - Hidrolik ve Mekanik Makina İmalat San. ve Tic. A.Ş.**:Breakthrough European Technologies Yielding Construction sovereignty, Diversity & Efficiency of Resources
- **Korteks Mensucat San. ve Tic. A.Ş.** ve **Sun Tekstil San. ve Tic. A.Ş.**:New technologies to integrate PLASTIC waste in the Circular Economy
- **Ford Otomotiv San. A.Ş.**, **Türkiye Bilimsel ve Teknolojik Araştırma Kurumu**, **Sakarya Elektrik Dağıtım Şirketi**, **Mutlu Akü ve Malz. San. A.Ş.** ve **Türkiye Petrol Rafinerileri A.Ş.**: Digitally-enabled FLEXible Industries for reliable energy grids under high penetration of Variable Renewable Energy Sources)
- **Ford Otomotiv San. A.Ş.**: Recycling of end of life battery packs for domestic raw material supply chains and enhanced circular economy
- **İzmir Yüksek Teknoloji Enstitüsü**: Raw materials from geothermal fluids: occurrence, enrichment, extraction
- **Arçelik A.Ş.**: Plastics Recycling from and for home appliances, toys and textile
- **Arçelik A.Ş.**: Toxic Free metallization process for plastic surfaces
- **Coşkunöz Kalıp Makina San. ve Tic. A.Ş.**: Metal Matrix Nano-composite Coatings Utilization as Alternative to Hard Chromium
- **Arçelik A.Ş.**: Smart Response Self-Desinfected Biobased NanoCoated Surfaces for Healthier Environments
- **Eczacıbaşı Yapı Gereçleri San. ve Tic. A.Ş.**, **Almaxtex Tekstil San. ve Tic. A.Ş.** ve **Panasonic Life Solutions Elektrik San. ve Tic. A.Ş.**: Sustainable Antimicrobial and Antiviral Nanocoating
- **Zorlu Enerji Elektrik Üretim A.Ş.** ve **TPI Kompozit Kanat San. ve Tic. A.Ş.**: Joint Industrial Data Exchange Pipeline
- **DE Sürdürülebilir Enerji ve İnşaat San. Ltd. Şti.** ve **Kadıköy Belediyesi:** S=Smart U=Upgraded asset-values and quality of life P=Public Private Partnership E=Extended Energy Efficiency R=Renewables triggered by the project SH=Social Housing I=Investment N=Net Zero E=European

Küme 4 Endüstri Alanı 2022 Yılı Çağrılarındaki Başarılarımız

Ülkemizden 11 Farklı Projede Yer Alan 16 Proje Ortağına Toplam 5.4 Milyon Avro Hibe

- **Farplas Otomotiv A.Ş.**: SustainablY aNd digiTally driven hiErarchical laser texturing for Complex Surfaces
- **Tofaş Türk Otomobil Fabrikası A.Ş.**: Handling with AI-enhanced Robotic Technologies for flexible manufacturing
- **KOÇ Üniversitesi**: Data-driven method based on a process mining approach for Automated Digital Twin generation, operations, and maintenance in circular value chains
- **Arçelik**: Digitalised Value Management for Unlocking the potential of the Circular Manufacturing Systems with integrated digital solutions
- **İstanbul Büyükşehir Belediyesi** ve **Teknoloji Arastirma ve Gelistirme Endustriyel Ürünler Bilişim Teknolojileri San. ve Tic. A.Ş.**: CircularPSP – Public Service Platforms for Circular, Innovative and Resilient Municipalities through PCP
- **Olgun Çelik Sanayi ve Ticaret A.Ş.:** Fully Recyclable Hybrid Bio-composite for Transport Applications
- **Mercedes-Benz Türk A.Ş.**: Advanced lightweight materials FOR Energy-efficient STructures
- **İstanbul Teknik Üniversitesi, Ereğli Demir ve Çelik Fabrikaları Türk A.Ş., Erdemir Mühendislik Yönetim ve Danışmanlık Hizmetleri A.Ş.** ve **Memsis Çevre Teknolojileri Araştırma ve Geliştirme Ltd Şti.**: Customised membranes for green and resilient industries
- **Kansai Altan Boya Sanayi A.Ş.**: An Open Innovation Ecosystem for exploitation of materials for building envelopes towards zero energy buildings
- **Denge Kimya** ve **Sun Tekstil San. ve Tic. A.Ş.**: New Routes of Safe and Sustainable by Design Water and Oil Repellent Biobased Coatings
- **Fankom Mühendislik Makine Enerji ve Bilgisayar Ticaret Ltd. Şti.**: Open Innovation Platform for Optimising Production Systems by Combining Product Development, Virtual Engineering Workflows and Production Data

Küme 4 Endüstri Alanı 2023 Yılı Çağrılarındaki Başarılarımız

Ülkemizden 15 Farklı Projede Yer Alan 23 Proje Ortağına Toplam 8.5 Milyon Avro Hibe

- **Tofaş Türk Otomobil Fabrikası A.Ş.**: Flexible Laser-based manufacturing through precision photon distribution
- **Farplas Otomotiv A.Ş.**, **Profen İletişim Teknolojileri ve Hizmetleri Sanayi Ticaret A.Ş.** ve **Türk Havacılık Uzay Sanayii A.Ş.:** Circularity and Remanufacturing-Enabling DIgital Twins
- **Navtek Denizcilik Teknolojileri A.Ş.:** Sustainable Remanufacturing solution with increased automation and recycled content in laser and plasma-based process
- **Arçelik A.Ş.**, **İlpea Plastik ve Kauçuk Ürünleri San. ve Tic. Ltd. Şti.** ve **Smartopt Bilişim Teknolojileri A.Ş.**,: Manufacturing as a Service to Increase Resilience in Value Networks
- **Smartopt Bilişim Teknolojileri A.Ş.**, **Arçelik A.Ş.** ve **Karel Elektronik Sanayi ve Ticaret A.Ş.**: Technologies for Manufacturing as a Service Ecosystems
- **İstanbul Maden ve Metaller İhracatçı Birlikleri**, **Türkiye Petrol Rafinerileri A.Ş.** ve **Arçelik A.Ş.:** Sustainable Circular Economy Transition: From Industrial Symbiosis to Hubs for Circularity
- **Organik Kimya Sanayi ve Ticaret A.Ş.:** Industrial Water Circularity: Reuse, Resource Recovery and Energy Efficiency for Greener Digitised EU Processes
- **Arçelik A.Ş.**: Flexible remanufacturıng using AI and advanced robotics for circular value chains in EU industry
- **Orta Doğu Teknik Üniversitesi.**: Decarbonized Titanium Recovery from Aluminium and Titanium Production Residues
- **Ford Otomotiv Sanayi A.Ş.**: Recycling technologies for ELV components to create a sustainable source of market grade materials for EU applications
- **Korteks Mensucat Sanayi ve Ticaret A.Ş.**: Safe and Sustainable by Design framework for the next generation of Chemicals and Materials
- **Oyak Renault Otomobil Fabrikaları A.Ş.**: AI-driven multiscale methodology to develop Transparent Wood as sustainable functional material
- **Martur Sünger ve Koltuk Tesisleri Ticaret San. A.Ş.:** Sustainable, Biobased and Bio-Inspired Materials for Smart Technical Textiles
- **IND Yazilim Bilisim Teknolojileri San. ve Tic. A.S.** : Innovative modelling and assessment capabilities through MaaS for Manufacturing Ecosystem resiliency
- **Arçelik A.Ş.**: Digitally-enhanced multi-level solution for smart human-centric remanufacturing

Küme 4 Endüstri Alanı 2024 Yılı Tek Aşamalı Çağrılarındaki Başarılarımız

Ülkemizden 10 Farklı Projede Yer Alan 1 Koordinatör ve 17 Proje Ortağına Toplam 6.95 Milyon Avro Hibe

• **Sabancı Üniversitesi, TUSAŞ-Türk Havacılık ve Uzay Sanayii A.Ş., Coşkunöz Kalıp Makina San. ve Tic. A.Ş.:** Demonstration of a sustainable circular-by-design manufacturing system based on additive manufacturing

• **Arçelik A.Ş.:** Enabling Circular Value Chains via Production Digitization and Human Empowerment

• **Teknopar Bilişim:** Streamlining the optimisation of Sustainable Thermal Energy systems and Prototype technologies in process industries

• **Türkiye Petrol Rafinerileri A.Ş.:** Innovative electrochemical CO_2 Conversion to Versatile Feedstock

• **TUSAŞ-Türk Havacılık ve Uzay Sanayii A.Ş.:** Resource efficient materials for Additive Manufacturing

• **Tofaş Türk Otomobil Fabrikası A.Ş.**: Seamless digital integration in steel value chain for high quality final products

• **Baştaş Başkent Çimento San. ve Tic. A.Ş., Ekodenge Mühendislik Mimarlık Danışmanlık Ticaret A.Ş., Ensensei Mühendislik Danışmanlık Limited Şirketi, Intract Inovasyon Danışmanlık Limited Şirketi, Minova Proses Madencilik Limited Şirketi, Tepe Betopan Yapı Malzemeleri San. ve Tic. A.Ş., İnşaat Malzemesi Sanayicileri Derneği:** Networked industrial-urban symbiosis value chain demonstrators for biomaterials, C&DW, circular water loops & WWTPs, driven by Hubs 4 Circularity

• **Ereğli Demir ve Çelik Fabrikaları Türk A.Ş.**: Decarbonized Steel Production with Novel Processes

• **Ford Otomotiv Sanayi A.Ş.**: PERmanent MAgnet Network for the European Transition

• **Arçelik A.Ş.:** Development and manufacture of new, more sustainable and safer materials using biobased functionalised additives based on lingin and tannins to improve fire resistance

Ufuk Avrupa Programı Dijital, Endüstri ve Uzay Kümesi

AB Çerçeve Programları Müdürlüğü
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