

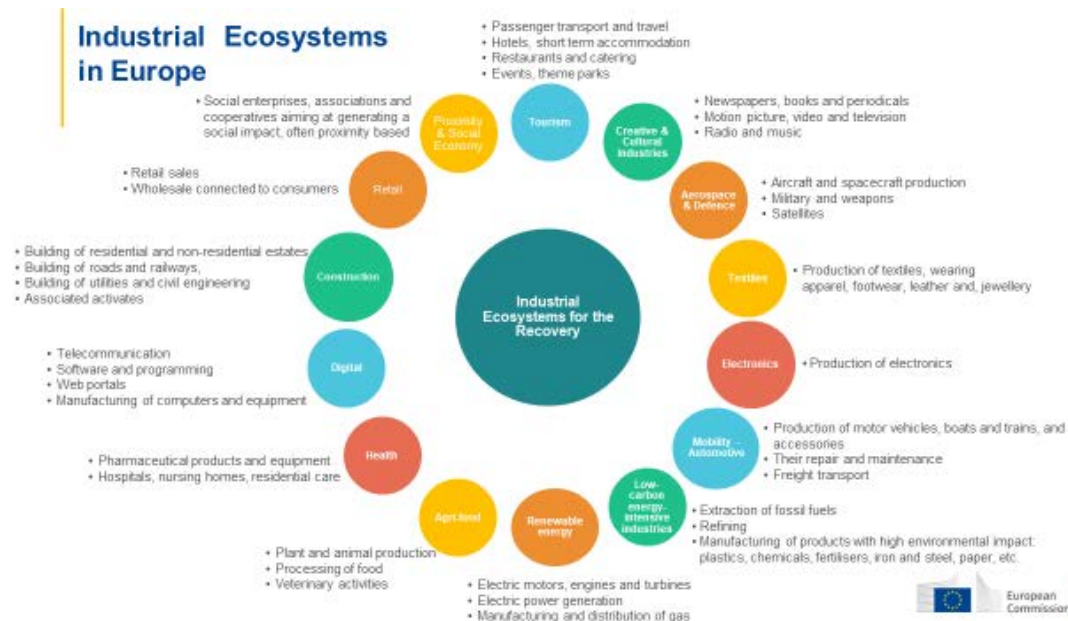
## Industrial Ecosystems in Europe

### Technical Mapping

This document presents the CEN and CENELEC contributions relating to the Annual Work Programme 2021, considering the 14 industrial Ecosystems identified in [Europe's moment: Repair and Prepare for the Next Generation \(Recovery plan\)](#) and is structured in a table as follows:

- the 1<sup>st</sup> column identifies the Ecosystem subgroup, in line with the Recovery plan
- the 2<sup>nd</sup> column includes the relevant EU policy / legislation
- the 3<sup>rd</sup> column presents ongoing and future activities in support of the Ecosystems
- the 4<sup>th</sup> column indicates technical bodies that groups (that could be) relevant for activities within the Ecosystems

It is worth mentioning that the activities presented in the 3<sup>rd</sup> column are not exclusive and exhaustive, as the CEN and CENELEC technical bodies can adapt their work programmes to answer future needs identified by their stakeholders, including the European Commission.



Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
<b>DIGITAL</b> CCMC contact: <a href="#">Constant Kohler</a>			
<b>DIGITAL</b> <b>Telecommunication</b>	<a href="#">COM (2020)65</a> - Artificial Intelligence - A European approach to excellence and trust <a href="#">COM (2020)66</a> - A European strategy for data <a href="#">COM (2020)67</a> - Shaping Europe's digital future	Work of <a href="#">CLC/TC 13</a> on Communication of smart metering Work of <a href="#">CLC/TC 57</a> on Communication for Power Utilities and Distributed Energy Resources (DER) Work of <a href="#">CLC/TC 69X</a> on Communication for electrical vehicles Work of <a href="#">CLC/TC 205</a> on Communication for smart buildings, on Ontologies in the energy field and on Cybersecurity for home automation and building automation systems (HBS/BACS) Work of <a href="#">CLC/TC 215</a> on Telecom network in houses Activities of <a href="#">CEN-CLC/JTC 13</a> on Cybersecurity Activities of <a href="#">CEN-CLC Focus Group 'Artificial Intelligence'</a> , notably the 'European standardization Roadmap for Artificial Intelligence' and the reply to the EC White paper on Artificial Intelligence (already submitted to the EC).	<a href="#">CEN-CLC Focus Group 'Artificial Intelligence'</a> <a href="#">CEN-CLC Focus Group 'Quantum Technologies'</a> <a href="#">CEN-CLC/JTC 13</a> 'Cybersecurity and Data Protection' <a href="#">CLC/TC 13</a> 'Electrical energy measurement and control' <a href="#">CLC/TC 57</a> 'Power systems management and associated information exchange' <a href="#">CLC/TC 65X</a> 'Industrial-process measurement, control and automation' <a href="#">CLC/TC 69X</a> 'Electrical systems for electric road vehicles' <a href="#">CLC/TC 108X</a> 'Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology' <a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)' <a href="#">CLC/TC 215</a> 'Electrotechnical aspects of telecommunication equipment' <a href="#">CEN/TC 294</a> 'Communication systems for meters'
<b>DIGITAL</b> <b>Software and programming</b>	<a href="#">COM (2020)66</a> - A European strategy for data <a href="#">COM (2020)67</a> - Shaping Europe's digital future	Work of <a href="#">CEN-CLC Sector Forum Energy Efficiency</a> , WG on <b>Blockchain in the energy sector</b> , which will map needs and gaps and make recommendation for further standardization development in the energy sector.	<a href="#">CEN-CLC Focus Group 'Artificial Intelligence'</a> <a href="#">CEN-CLC Focus Group 'Quantum Technologies'</a>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>Standards of <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p><a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.</p> <p>Standard from <a href="#">CEN/TC 224</a> on Secure and interoperable European Breeder Documents (EN 17489). This TC furthermore develop several specifications and reports in the context of Biometrics. E.g. Biometric group access control, Biometric authentication for critical infrastructure access control, Robustness against biometric presentation attacks.</p> <p>Standard from <a href="#">CEN/TC 225</a> for RFID in rail in order to describe the implementation of the European Vehicle Number (EVN) of the railway rolling stock in an electronic format.</p> <p>Work of <a href="#">CEN-CLC/JTC 13</a>: The JTC is developing a standardized methodology to evaluate the Cybersecurity of ICT products, which should support market transparency. Furthermore JTC 13 is working on standards to support the implementation of the GDPR by providing standardized approaches for data protection measures and processes. JTC 13 supports with its work the implementation of the Cybersecurity act of the European Union and therefore strengthens the European digital single market regarding Cyberresilience.</p> <p>Work of <a href="#">CEN-CLC/JTC 19</a> on 'Identity management in Blockchain'.</p> <p>Work of <a href="#">CEN-CLC-ETSI CG Smart Energy Grids</a> in the context of the digitalisation of the energy sector:</p> <ul style="list-style-type: none"> <li>- Dozens of coming standards developed in IEC with a very strong support and collaboration of CENELEC members, to better support smart energy (including</li> </ul>	<p><a href="#">CEN-CLC Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy storage</p> <p><a href="#">CEN-CLC Focus Group 'Blockchain and Distributed Ledger technologies'</a></p> <p><a href="#">CEN-CLC-ETSI Coordination Group 'Smart Energy Grids'</a></p> <p><a href="#">CEN-CLC/JTC 13</a> 'Cybersecurity and Data Protection'</p> <p><a href="#">CEN-CLC/JTC 19</a> 'Blockchain and Distributed Ledger Technologies'</p> <p><a href="#">CEN/TC 224</a> 'Personal identification and related personal devices with secure element, systems, operations and privacy in a multi sectorial environment'</p> <p><a href="#">CEN/TC 225</a> 'AIDC technologies'</p> <p><a href="#">CEN/TC 428</a> 'ICT Professionalism and Digital Competences'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CLC/TC 9X</a> 'Electrical and electronic applications for railways'</p> <p><a href="#">CLC/TC 11</a> 'Overhead electrical lines exceeding 1 kV a.c. (1,5 kV d.c.)'</p> <p><a href="#">CLC/TC 13</a> 'Electrical energy measurement and control'</p> <p><a href="#">CLC/TC 14</a> 'Power transformers'</p> <p><a href="#">CLC/TC 17AC</a> 'High-voltage switchgear and controlgear'</p> <p><a href="#">CLC/TC 57</a> 'Power systems management and associated information exchange'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>power grids, distributed energy resources, network codes, energy services, flexibility, ...) encompassing data models, communication protocols, cybersecurity, ...</p> <p>- A new code component policy for spreading machine readable content to all users.</p> <p>Work of <a href="#">CLC/TC 11</a> on Data models for overhead lines</p> <p>Work of <a href="#">CLC/TC 13</a> on Data models for smart metering' and 'Smart metering systems cybersecurity</p> <p>Work of <a href="#">CLC/TC 14</a> on Data models for power transformers</p> <p>Work of <a href="#">CLC/TC 17AC</a> on Data models for switchgear and control gear</p> <p>Work of <a href="#">CLC/TC 57</a> on Data models for Power Utilities and DER' and 'Power systems cybersecurity</p> <p>Work of <a href="#">CLC/TC 65X</a> on Data models for industrial process and for industrial process cybersecurity</p> <p>Work of <a href="#">CLC/TC 69X</a> on Data models for electrical vehicle</p> <p>Work of <a href="#">CLC/TC 99X</a> on Data models for power substation</p> <p>Work of <a href="#">CLC/TC 111X</a> on Data models for materials - Circular economy</p> <p>Work of <a href="#">CLC/TC 205</a> on Data models for smart buildings' and associated ontologies</p>	<p><a href="#">CLC/TC 65X</a> 'Industrial-process measurement, control and automation'</p> <p><a href="#">CLC/TC 69X</a> 'Electrical systems for electric road vehicles'</p> <p><a href="#">CLC/TC 99X</a> 'Power installations exceeding 1 kV a.c. (1,5 kV d.c.)'</p> <p><a href="#">CLC/TC 111X</a> 'Environment'</p> <p><a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)'</p>
<p><b>DIGITAL</b> Web portals</p>	<p><a href="#">COM (2020)65</a> - Artificial Intelligence - A European approach to excellence and trust</p> <p><a href="#">COM (2020)66</a> - A European strategy for data</p> <p><a href="#">COM (2020)67</a> - Shaping Europe's digital future</p>		<p><a href="#">CEN/TC 365</a> 'Internet Filtering'</p>
<p><b>DIGITAL</b> Manufacturing of computers and equipment</p>	<p><a href="#">COM (2020)65</a> - Artificial Intelligence - A European approach to excellence and trust</p> <p><a href="#">COM (2020)66</a> - A European strategy for data</p> <p><a href="#">COM (2020)67</a> - Shaping Europe's digital future</p>	<p>Work of <a href="#">CEN-CLC/JTC 13</a> on Cyber</p> <p>Work of <a href="#">CLC/TC 205</a> on Home and Building Electronic Systems</p> <p>Work of <a href="#">CEN/TC 310</a>, which currently has two active items</p>	<p>CEN-CLC-ETSI Coordination Group 'Smart Manufacturing'</p> <p><a href="#">CEN-CLC/JTC 10</a> 'Energy-related products - Material Efficiency Aspects for Ecodesign'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		ongoing in the robotics area (being developed in collaboration with ISO/TC 299 Robotics): - Revision of EN ISO 10218-1 - Revision of EN ISO 10218-2 both of which are candidate harmonized Standards under the Machinery Safety Directive and expected publication of both is 2021.	<a href="#">CEN-CLC/JTC 13</a> 'Cybersecurity and Data Protection' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications' <a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)' 
<b>HEALTH</b> CCMC contact: <a href="#">Jennifer Ogbonna</a>			
<b>HEALTH</b> <b>Pharmaceutical products and equipment</b>	<a href="#">Regulation (EU) No 2017/745</a> on Medical devices <a href="#">Regulation (EU) No 2017/746</a> on In vitro diagnostic medical devices <a href="#">COM (2014)215</a> on Effective, accessible and resilient health systems <a href="#">COM (2014)219</a> on Mobile Health	In the <b>e-Health</b> sector, <a href="#">CEN/TC 251</a> will work towards finalising a Technical Specification on 'International Patient Summary - Guideline for European Implementation', which will be then brought to the attention of the European Commission, together with the recently published EN 17269:2019 'Health informatics - The International Patient Summary', as a starting point for possible standardization activity for the prioritized European Electronic Health record Exchange Format, as described in the Commission Recommendation 'On a European Electronic Health Record exchange format'.  Also, CEN/TC 251 is working to develop a Technical Specification on 'Health and wellness apps - Quality and reliability' – this work is in cooperation with its international counterpart ISO/TC 215. Over the last months, this piece of work has been brought under the attention of the European Commission regarding the EU toolbox for the use of mobile applications for contact tracing and warning in response to the coronavirus pandemic.  Draft standards developed by <a href="#">CEN/TC 215</a> for respiratory equipment, harmonized to <a href="#">Regulation (EU) No 2017/745</a> , on Medical devices to support European manufacturers in bringing to market products that are safe and clinically effective in supporting patients with respiratory diseases as well as improving long-term health outcomes. As far as possible <a href="#">CEN/TC 215</a> will perform all these activities in	<a href="#">CEN-CLC/JTC 3</a> 'Quality management and corresponding general aspects for medical devices' <a href="#">CEN/TC 55</a> 'Dentistry' <a href="#">CEN/TC 102</a> 'Sterilizers and associated equipment for processing of medical devices' <a href="#">CEN/TC 140</a> 'In vitro diagnostic medical devices' <a href="#">CEN/TC 146</a> 'Packaging machines – Safety' <a href="#">CEN/TC 153</a> 'Machinery intended for use with foodstuffs and feed' <a href="#">CEN/TC 170</a> 'Ophthalmic optics' <a href="#">CEN/TC 204</a> 'Sterilization of medical devices' <a href="#">CEN/TC 205</a> 'Non-active medical devices' <a href="#">CEN/TC 206</a> 'Biological and clinical evaluation of medical devices' <a href="#">CEN/TC 215</a> 'Respiratory and anaesthetic equipment' <a href="#">CEN/TC 216</a> 'Chemical disinfectants and antiseptics'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		cooperation with ISO/TC 121 'Anaesthetic and respiratory equipment'.	<a href="#">CEN/TC 243</a> 'Cleanroom technology' <a href="#">CEN/TC 251</a> 'Health informatics' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications' <a href="#">CLC/TC 62</a> 'Electrical equipment in medical practice'
<b>HEALTH</b> Hospitals, nursing homes, residential care	<a href="#">COM(2008)725</a> on the European Workforce for Health	<a href="#">CEN/TC 450</a> work on 'Patient involvement in health care - Minimum requirements for person-centred care'.	<a href="#">CEN/TC 449</a> 'Quality of care for older people' <a href="#">CEN/TC 450</a> 'Patient involvement in person-centred care'
<b>HEALTH – SUGGESTED SUBGROUP</b> Health-Enhancing Physical Activity (HEPA)	COM(2011) 0012 on 'Developing the European Dimension in Sport' Erasmus+ EU Work Plan for Sport (Resolution of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, on the European Union Work Plan for Sport (1 July 2017-31 December 2020), OJ C 189, 15.6.2017, p. 5.)	EU supports the sport sector structurally through Erasmus+, and recognizes with COM(2011) 0012 'Developing the European Dimension in Sport' the potential of sport to make a significant contribution to the overall objectives of the Europe 2020 strategy for growth and jobs, as well as the improvement by sport to employability and promotion of social inclusion.  With all its current and future standards, <a href="#">CEN/TC 136</a> supports the EU in achieving its goals.	<a href="#">CEN/TC 136</a> 'Sports, playground and other recreational facilities and equipment'
<b>AGRIFOOD</b> CCMC contact: <a href="#">Christina Thorngreen</a>			
<b>AGRIFOOD</b> Plant and animal production	<a href="#">Regulation (EC) No 882/2004</a> on controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules  <a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy <a href="#">Regulation 2019/1009</a> on the making available on the market of EU fertilising products <a href="#">M/435</a> - Inspection of pesticide application equipment	In the plant production area, CEN has been mandated to draft harmonized standards in support of Regulation (EU) 2019/1009 for EU fertilising products, through Standardization Request <a href="#">M/564</a> . In order to provide the market with the means to claim proof of compliance, Technical Specifications (TSs) followed by harmonized European standards (hENs) will be developed by <a href="#">CEN/TC 223</a> , <a href="#">CEN/TC 260</a> and <a href="#">CEN/TC 455</a> .  In the frame of M/564 a huge part of the standardization activities is on products from recycled or organic material to promote the development of circular economy and more	<a href="#">CEN/TC153</a> 'Machinery intended for use with foodstuffs and feed' - WG 9 - Machinery for processing animal feed  <a href="#">CEN/TC 144</a> 'Tractors and machinery for agriculture and forestry'  <a href="#">CEN/TC 223</a> 'Soil improvers and growing media'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
	<p><a href="#">M/547 - C (2016)1582</a> – Algae and algae-based products and intermediates</p> <p><a href="#">M/564 – C (2020)612</a> - Fertilising products</p> <p><a href="#">European Green Deal</a></p>	<p>resource-efficient use of nutrients.</p> <p><a href="#">CEN/TC 144</a> publishes standards on all machinery for agriculture, forestry and gardening. Its objectives are to contribute to the safety of users/workers whatever the equipment (recent or no), to protect the environment when using fertilizers or plant protection products, to contribute to the energy efficiency and CO2 emissions.</p> <p><a href="#">CEN/TC 144</a> has identified two work items related to environment requirements for plant productions products applied as dust or granules, which should be processed further on in 2021.</p> <p><a href="#">CEN/TC 454</a> will finalize several Standards and Technical Reports in support of <a href="#">M/547</a> on Algae and algae-based products and intermediates.</p> <p><a href="#">CEN/TC 310</a> is also most relevant within the fast emerging ArgiTech and Vertical Farming and tradition Farming sectors and is involved in the work done at ISO &amp; IEC level.</p>	<p><a href="#">CEN/TC 230</a> 'Water analysis'</p> <p><a href="#">CEN/TC 248</a> 'Textiles and textile product'</p> <p><a href="#">CEN/TC 260</a> 'Fertilizers and liming materials'</p> <p><a href="#">CEN/TC 264</a> 'Air quality'</p> <p><a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'</p> <p><a href="#">CEN/TC 327</a> 'Animal feeding stuffs - Methods of sampling and analysis'</p> <p><a href="#">CEN/TC 444</a> 'Environmental characterization of solid matrices'</p> <p><a href="#">CEN/TC 454</a> 'Algae and algae products'</p> <p><a href="#">CEN/TC 455</a> 'Plant Biostimulants'</p> <p><a href="#">CEN/TC 463</a> 'Microbiology of the food chain'</p>
<p><b>AGRIFOOD</b></p> <p>Processing of food</p>	<p><a href="#">Regulation (EC) No 882/2004</a> on controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules</p> <p><a href="#">M/520</a> – Mycotoxins in food</p> <p><a href="#">M/547 - C (2016)1582</a> – Algae and algae-based products and intermediates</p>	<p><a href="#">CEN/TC 454</a> will finalize several Standards and Technical Reports in support of <a href="#">M/547</a> on Algae and algae-based products and intermediates.</p> <p>Work of <a href="#">CEN/TC 275</a> in support to Regulation (EC) No 882/2004: currently, new standards are drafted or planned with regards to the determination/detection of</p> <ul style="list-style-type: none"> <li>- pesticide residues, polar pesticides such as glyphosate, pesticides in matrices of animal origin, pesticides by high resolution mass spectrometry;</li> <li>- biotoxines (under <a href="#">M/520</a>), e.g. FprEN 17424 (aflatoxins in spices), FprEN 17425 (ergot alkaloids in cereals and cereal products), prEN 17521 (Alternaria toxins in tomato, wheat, sunflower seeds);</li> <li>- irradiated food, e.g. prEN 13708 (food containing crystalline sugar), prEN 1787 (food containing cellulose);</li> <li>- elements and their chemical species (WI00275368);</li> <li>- allergenes (liquid chromatography mass</li> </ul>	<p><a href="#">CEN/TC 144</a> 'Tractors and machinery for agriculture and forestry'</p> <p><a href="#">CEN/TC 146</a> 'Packaging machines – Safety'</p> <p><a href="#">CEN/TC 153</a> 'Machinery intended for use with foodstuffs and feed'</p> <p><a href="#">CEN/TC 275</a> 'Food analysis - Horizontal methods'</p> <p><a href="#">CEN/TC 327</a> 'Animal feeding stuffs - Methods of sampling and analysis'</p> <p><a href="#">CEN/TC 454</a> 'Algae and algae products'</p> <p><a href="#">CEN/TC 460</a> 'Food authenticity'</p> <p><a href="#">CEN/TC 463</a> 'Microbiology of the food chain'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		- spectrometric method). <a href="#">CEN/TC 460</a> is working on new standards for food authenticity, including methods for fish, bivalves, mammalia, birds, crustacea, coffee, honey and their derived products. Depending on the needs, future projects might focus on plants, Basmati rice, vinegar, wheat and thuna.	
<b>AGRIFOOD</b> Veterinary activities	<a href="#">European Green Deal</a>		<a href="#">CEN/TC 216</a> 'Chemical disinfectants and antiseptics'
<b>RENEWABLE ENERGY</b> CCMC contact: <a href="#">Catherine Vigneron</a>			
<b>RENEWABLE ENERGY</b> Electric motors, engines and turbines	<a href="#">European Green Deal</a>	Work of <a href="#">CLC/TC 23BX</a> on HBES products Work of <a href="#">CLC/TC 23H</a> and <a href="#">CLC/TC 69X</a> on EV charging Work of <a href="#">CLC/TC 57</a> on Data models for hydro power plants and Distributed energy resources (Genset, generation aggregation, CHP, ...) Work of <a href="#">CLC/TC 85X</a> on Measurement equipment Work of <a href="#">CLC/TC 88</a> on Wind farms and wind turbines including data models Work of <a href="#">CLC/TC 205</a> on <ul style="list-style-type: none"> <li>- HBES</li> <li>- Customer energy manager</li> <li>- SAREF</li> <li>- Data models for distributed energy resources in smart buildings' and associated ontologies</li> </ul> Work of <a href="#">CEN-CLC/JTC 14</a> : <ul style="list-style-type: none"> <li>- Revision of EN 16325 'Guarantees of origin related to energy. Guarantee of origin for electricity': to take into account requirement of Art. 19 of 2018/2001 Directive</li> <li>- prEN 17463 Methodology for Valuation of Energy Related Investment</li> <li>- Revision of EN 16247-3 'Energy audits: processes'</li> </ul>	<a href="#">CEN-CLC-ETSI Coordination Group 'Smart Energy Grids'</a> <a href="#">CEN-CENELEC-ETSI Coordination Group on Smart Meters</a> <a href="#">CEN-CLC/JTC 6</a> 'Hydrogen in energy systems' <a href="#">CEN-CLC/JTC 10</a> 'Energy-related products - Material Efficiency Aspects for Ecodesign' <a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition' <a href="#">CEN/TC 270</a> 'Internal combustion engines' <a href="#">CEN/TC 399</a> 'Gas Turbines applications – Safety' <a href="#">CEN/WS 073</a> 'Eco-efficient Substations' <a href="#">CLC/TC 23BX</a> 'Switches, boxes and enclosures for household and similar purposes, plugs and socket outlet for D.C.' <a href="#">CLC/TC 23H</a> 'Plugs, socket-outlets and



Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>These Standards will help</p> <ul style="list-style-type: none"> <li>- de-risk the EU initiatives or clusters;</li> <li>- ensure materiality to the financiability of the projects;</li> <li>- ensure materiality to the non financial disclosure of the projects;</li> <li>- ensure materiality of the 'green labelling' of the projects</li> <li>- ensure technical, accounting, sustainable materiality throughout project lifetime.</li> </ul>	<p>couplers for industrial and similar applications, and for electric vehicles'</p> <p><a href="#">CLC/TC 45AX</a> 'Instrumentation, control &amp; electrical power systems of nuclear facilities'</p> <p><a href="#">CLC/TC 57</a> 'Power systems management and associated information exchange'</p> <p><a href="#">CLC/TC 62</a> 'Electrical equipment in medical practice'</p> <p><a href="#">CLC/TC 69X</a> 'Electrical systems for electric road vehicles'</p> <p><a href="#">CLC/TC 85X</a> 'Measuring equipment for electrical and electromagnetic quantities'</p> <p><a href="#">CLC/TC 88</a> 'Wind turbines'</p> <p><a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)'</p>
<p><b>RENEWABLE ENERGY</b> Electric power generation</p>	<p><a href="#">Directive 2018/2001</a> on the promotion of the use of energy from renewable sources</p>	<p>Work of <a href="#">CEN-CLC/JTC 14</a>:</p> <ul style="list-style-type: none"> <li>- Revision of EN 16325 'Guarantees of origin related to energy. Guarantee of origin for electricity': to take into account requirement of Art. 19 of 2018/2001 Directive.</li> <li>- prEN 17463 Methodology for Valuation of Energy Related Investment</li> <li>- Revision of EN 16247-3 'Energy audits: processes'</li> </ul> <p>Activities of CEN-CLC <a href="#">SF 'Energy Efficiency-Energy Transition'</a>, WG on <a href="#">Energy storage</a>, which addresses requirements and needs about energy storage, including electrical storage</p> <p>Work of <a href="#">CEN-CLC-ETSI CG 'Smart Energy Grids'</a>:</p> <ul style="list-style-type: none"> <li>- Standardisation assessment for supporting the Clean Energy Package</li> <li>- Comings standards to better support renewable energy</li> </ul>	<p><a href="#">CEN-CLC/JTC 10</a> 'Energy-related products - Material Efficiency Aspects for Ecodesign'</p> <p><a href="#">CEN-CLC/JTC 6</a> 'Hydrogen in energy systems'</p> <p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'</p> <p>CEN-CLC <a href="#">Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy storage</p> <p><a href="#">CEN-CLC-ETSI Coordination Group on Smart Meters</a></p> <p><a href="#">CEN-CLC e-MCG 'e-Mobility Coordinating Group'</a></p> <p><a href="#">CEN/TC 301</a> 'Road vehicles'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>Work of <a href="#">CLC/SR 23</a> on Self-consumption</p> <p>Work of <a href="#">CLC/TC 23E</a> on Protection of Photovoltaics</p> <p>Work of <a href="#">CLC/SR 23K</a> on Load shedding and source switching equipment</p> <p>Work of <a href="#">CLC/TC 45AX</a>:</p> <p>For the 21st century energy will remain for Europe one of the major issues to face up. Nuclear energy, as the largest single source of carbon-free and base load electricity in Europe has a key role to play in solving European energy problems. Safety and security of operation of nuclear power plants relies on instrumentation and control systems (I&amp;C) and EPS (electrical power system), which together with plant operations personnel, serves as the 'central nervous system' of a nuclear power plant. <a href="#">CLC/TC 45AX</a> publishes EN standards to cover the entire lifecycle of these I&amp;C systems, from conception, through design, manufacture, test, installation, commissioning, operation, maintenance, aging management, extension of operating life, modernization and decommissioning. In 2020 and 2021, <a href="#">CLC/TC 45AX</a> will focus the effort on the publication of cybersecurity standards for NPP (EN 62645 and EN 62859), publication of EMC standard (EN 62003), publication of seismic qualification standard (EN 60980-344) and on publication of standards for NPP electric power system (EN 63046).</p> <p>Work of <a href="#">CLC/TC 57</a> on Power Utilities systems including hydro power plants and Distributed energy resources (PV, Genset, Fuel cells, generation aggregation, CHP, ...) and demand response'</p> <p>Work of <a href="#">CLC/TC 82</a> on Photovoltaics</p> <p>Work of <a href="#">CLC/TC 88</a> on Wind farms and wind turbines including data models</p> <p>Work of <a href="#">CLC/SR 120</a> on Electrical energy storage systems'</p> <p>Work of <a href="#">CLC/TC 205</a> on Data models for distributed energy</p>	<p><a href="#">CEN/TC 399</a> 'Gas Turbines applications – Safety'</p> <p><a href="#">CLC/TC 8X</a> 'System aspects of electrical energy supply'</p> <p><a href="#">CLC/TC 9X</a> 'Electrical equipment and systems for railways'</p> <p><a href="#">CLC/TC 13</a> 'Electrical energy measurement and control'</p> <p><a href="#">CLC/TC 21X</a> 'Secondary cells and batteries'</p> <p><a href="#">CLC/SR 23</a> 'Electrical accessories'</p> <p><a href="#">CLC/TC 23E</a> 'Circuit breakers and similar devices for household and similar applications'</p> <p><a href="#">CLC/SR 23K</a> 'Electrical energy efficiency products'</p> <p><a href="#">CLC/TC 45AX</a> 'Instrumentation, control and electrical power systems of nuclear facilities'</p> <p><a href="#">CLC/TC 57</a> 'Power systems management and associated information exchange'</p> <p><a href="#">CLC/TC 82</a> 'Solar photovoltaic energy systems'</p> <p><a href="#">CLC/TC 88</a> 'Wind turbines'</p> <p><a href="#">CLC/SR 120</a> 'Electrical Energy Storage (EES) Systems'</p> <p><a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>resources in smart buildings' and associated ontologies</p> <p>In the field of <b>Batteries</b>:</p> <p>Draft Ancillary Action on Material efficient recycling and preparation for re-use, which also covers waste batteries, which the EC is finalizing in collaboration with CEN/CENELEC. The formal notification is expected this year.</p>	
<p><b>RENEWABLE ENERGY</b></p> <p><b>Manufacturing and distribution of gas</b></p>	<p><a href="#">Directive 2018/2001</a> on the promotion of the use of energy from renewable sources</p>	<p>The <b>gas sector</b> TCs, under the umbrella of <a href="#">SF Gas infrastructure and Gas utilisation</a>, are verifying the need of revisions and new standards to enable hydrogen and other renewable and decarbonised gases in the gas system (as an admixture and 'pure') in support of the decarbonisation of energy systems.</p> <p>The TCs will appreciate a SReq for all uses of hydrogen in gas systems for a coordinated work.</p> <p>Work of <a href="#">CEN/TC 234</a>:</p> <ul style="list-style-type: none"> <li>- CEN/TR on the acceptance of hydrogen (if at all and how much in percentage) for the entire natural gas infrastructure</li> <li>- Draft CEN/TR 'Consequences of hydrogen in natural gas infrastructure and identification of related standardisation need in the scope of <a href="#">CEN/TC 234</a>', enabling the use of hydrogen/natural gas admixtures and the conversion into hydrogen infrastructure</li> <li>- Work Item on Conversion of natural gas pipelines into hydrogen pipelines to create a hydrogen infrastructure for Europe</li> <li>- Revision of the gas infrastructure standards</li> <li>- Series of draft standards for injection of renewable and decarbonised gases (incl. hydrogen, biomethane) into natural gas infrastructure</li> <li>- Non-discriminative integration of biomethane and SNG for all natural gas grids, biomethane to become a generally accepted 2<sup>nd</sup> family gas (<a href="#">CEN/TC 234</a> / <a href="#">CEN/TC 408</a>)</li> </ul>	<p>CEN-CLC <a href="#">Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy storage</p> <p><a href="#">CEN-CLC/JTC 6</a> 'Hydrogen in energy systems'</p> <p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'</p> <p><a href="#">CEN/TC 69</a> 'Industrial valves'</p> <p><a href="#">CEN/TC 155</a> 'Plastics piping systems and ducting systems'</p> <p><a href="#">CEN/TC 208</a> 'Elastomeric seals for joints in pipework and pipelines'</p> <p><a href="#">CEN/TC 232</a> 'Compressors, vacuum pumps and their systems'</p> <p><a href="#">CEN/TC 234</a> 'Gas infrastructure'</p> <p><a href="#">CEN/TC 235</a> 'Gas pressure regulators and associated safety devices for use in gas transmission and distribution'</p> <p><a href="#">CEN/TC 236</a> ' Non-industrial manually operated shut-off valves for gas and particular combinations valves-other products'</p> <p><a href="#">CEN/TC 237</a> 'Gas meters'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>Activities of <a href="#">CEN/TC 282</a>: Creation of an Ad Hoc Group to investigate the need for standardisation of Liquefied Hydrogen future industry</p> <p>In the field of <b>biogas production</b>, <a href="#">CEN/TC 408</a> will mirror the activities on different methods of production of ISO/TC 255 'Biogas':</p> <ul style="list-style-type: none"> <li>- domestic methanisation (ISO/FDIS 23590, Household biogas system requirements)</li> <li>- non-domestic methanisation (ISO/DIS 24252, Biogas systems — Non-household and non-gasification)</li> <li>- gasification and methanation (ISO/AWI 23898, Gasification systems for bio-syngas and biomethane production)</li> </ul> <p>Pre-Normative Research is carried out to remove technical barriers to the development of biomethane (impact on heavy duty vehicles, industrial boilers, underground storage facilities, steel fuel tanks) under the control of <a href="#">CEN/TC 408</a> (H2020 and DG ENER).</p> <p>Work of <a href="#">CEN-CLC/JTC 6</a>:</p> <ul style="list-style-type: none"> <li>- CEN/TR as guidance for safe use of hydrogen in built constructions</li> <li>- Check of all standards developed by ISO/TC 197 for conversion into ENs</li> </ul> <p>Work of <a href="#">CEN-CLC/JTC 14</a>: Revision of EN 16325 'Guarantees of origin related to energy. Guarantee of origin for electricity' to take into account requirement of Art. 19 of 2018/2001 Directive. (Hydrogen, Biomethane and other gases, heating and cooling)</p> <p>Work of CEN-CLC <a href="#">Sector Forum Energy Efficiency-Energy Transition</a>, including WG on Hydrogen, that</p>	<p><a href="#">CEN/TC 238</a> 'Test gases, test pressures, appliance categories and gas appliance types'</p> <p><a href="#">CEN/TC 282</a> 'Installation and equipment for LNG'</p> <p><a href="#">CEN/TC 19</a> 'Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin'</p> <p><a href="#">CEN/TC 343</a> 'Solid recovered fuels'</p> <p><a href="#">CEN/TC 408</a> 'Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid'</p> <p><a href="#">CEN/TC 441</a> 'Fuel labelling'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		addresses requirements and needs related to Power to Gas and pure hydrogen from production from renewables to injection to the natural gas grid or H2 pure applications.	
<p><b>RENEWABLE ENERGY – SUGGESTED SUBGROUP</b></p> <p>Hybridization of renewable heat supply</p>	<p><a href="#">Directive 2018/2001</a> on the promotion of the use of energy from renewable sources</p> <p>Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products</p> <p>Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU</p> <p><a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy</p> <p><a href="#">Construction Products Regulation</a></p>	<p>Development of a series of standards addressing the hybridization (rating of combinations of different interacting technologies) in the heat supply sector (space heating, domestic hot water, industrial heat), involving various CEN TCs</p> <p>Heating accounts for more than 50% of the European CO<sub>2</sub> emissions.</p>	<p><a href="#">CEN/TC 62</a> 'Independent gas-fired space heaters'</p> <p><a href="#">CEN/TC 89</a> 'Thermal performance of buildings and building components'</p> <p><a href="#">CEN/TC 110</a> 'Heat exchangers'</p> <p><a href="#">CEN/TC 156</a> 'Ventilation for buildings'</p> <p><a href="#">CEN/TC 171</a> 'Heat cost allocation'</p> <p><a href="#">CEN/TC 228</a> 'Heating systems and water based cooling systems in buildings'</p> <p><a href="#">CEN/TC 247</a> 'Building Automation, Controls and Building Management'</p> <p><a href="#">CEN/TC 284</a> 'Greenhouses'</p> <p><a href="#">CEN/TC 335</a> 'Solid biofuels'</p> <p><a href="#">CEN/TC 343</a> 'Solid Recovered Fuels'</p> <p><a href="#">CEN/TC 350</a> 'Sustainability of construction works'</p> <p><a href="#">CEN/TC 371</a> 'Energy Performance of Buildings project group'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling (BIM)'</p>
<p>LOW-CARBON ENERGY INTENSIVE INDUSTRY</p> <p>CCMC contact: <a href="#">Andrea Nam</a></p>			
<p>LOW-CARBON ENERGY INTENSIVE INDUSTRY</p> <p>Extraction of fossil fuels</p>	<p><a href="#">European Green Deal</a></p> <p><a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy</p>	<p>In the field of Green Deal / green and digital Europe, <a href="#">CEN/TC 12</a> is involved in the following activities:</p> <ul style="list-style-type: none"> <li>Contribution to the 'lower carbon standardisation agenda' under development within ISO/TC 67 'Materials,</li> </ul>	<p><a href="#">CEN/TC 12</a> 'Standardization of the materials, equipment and offshore structures used in the drilling/pipelines'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>equipment and offshore structures for the petroleum, petrochemical and natural gas industries' <a href="#">CEN/TC 12</a> is European mirror committee for most of activities of ISO/TC 67], for example through the ad-hoc group on green manufacturing that covers circularity aspects (the R-ladder) and lower carbon footprint.</p> <ul style="list-style-type: none"> <li>• Contribution to the 'lower carbon agenda' under development by IOGP, the International Association of Oil &amp; Gas Producers and liaison organisation with both <a href="#">CEN/TC 12</a> and ISO/TC 67, currently focussing on upstream activities for which the following themes are identified to be covered (subject to changes): <ul style="list-style-type: none"> <li>— power generation;</li> <li>— energy optimisation;</li> <li>— flares and vents;</li> <li>— reliability;</li> <li>— drilling;</li> <li>— CCUS;</li> <li>— Hydrogen.</li> </ul> </li> <li>• Contribution to developing a CEN Technical Report on assessment of methane emission in gas transmission and distribution systems, under leadership of <a href="#">CEN/TC 234</a>, also as part of standardisation activities on assessment of methane emissions in entire supply chain of the oil and gas sector.</li> <li>• Participation in the CEN-CENELEC activities related to digital transformation in the framework of 'Standards of the Future' including the pilot project for the petroleum sector.</li> <li>• Monitoring of developments in ISO/TC 67 advisory group on digital implementation.</li> </ul>	<p><a href="#">CEN/TC 197</a> 'Pumps'</p> <p><a href="#">CEN/TC 232</a> 'Compressors, vacuum pumps and their systems'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
<p>LOW-CARBON ENERGY INTENSIVE INDUSTRY</p> <p>Refining</p>	<p><a href="#">European Green Deal</a>  <a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy  <a href="#">Directive (EU) 2018/2001</a> - Use of energy from renewable sources</p>	<p>Work of <a href="#">CEN-CLC/JTC 14</a>:</p> <ul style="list-style-type: none"> <li>- Revision of EN 16325 'Guarantees of origin related to energy. Guarantee of origin for electricity' to take into account requirement of Art. 19 of 2018/2001 Directive. (Hydrogen, Biomethane and other gases, heating and cooling)</li> <li>- prEN 17463 Methodology for Valuation of Energy Related Investment</li> <li>- Revision of EN 16247-3 'Energy audits: processes'</li> </ul>	<p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'  <a href="#">CEN-CLC WS REEMAIN</a> 'Methodology for Resource and Energy Efficiency Manufacturing'</p>
<p>LOW-CARBON ENERGY INTENSIVE INDUSTRY</p> <p>Manufacturing of products with high environmental impact: plastics, chemicals, fertilisers, iron and steel, paper, etc.</p>	<p><a href="#">European Green Deal</a>  <a href="#">Directive 2019/904/EU</a> on Reduction of the impact of certain plastic products on the environment  <a href="#">M/547 - C (2016)1582</a> – Algae and algae-based products and intermediates            Directive (EU) 2015/720 amending Directive 94/62/EC as regards reducing the consumption of lightweight plastic carrier bags</p>	<p>In the frame of <a href="#">M/547 CEN/TC 454</a> will finalize several Standards and Technical Reports in 2021.</p> <p>Standards from <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p><a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.</p> <p>Information about products will be a part of the digital representation of the construction process and built asset. <a href="#">CEN/TC 442</a> develop standards that enable a digital infrastructure for information about carbon in the built environment.</p> <p><i>NOTE:</i>  <i>CEN and CENELEC have signed the <a href="#">declaration of the Circular Plastic Alliance</a>, committing to participate to the development and revision of European standards dealing with the recycling of plastics.</i>  <i>CEN expects a Standardization Request relating to the plastics recycling and recycled plastics. CEN has established a corresponding ad-hoc group „SRAHG Plastics recycling and recycled plastics' which is currently mapping the existing</i></p>	<p><a href="#">CEN/TC 145</a> 'Plastics and rubber machines'  <a href="#">CEN/TC 146</a> 'Packaging machines – Safety'  <a href="#">CEN/TC 147</a> 'Cranes -Safety'  <a href="#">CEN/TC 150</a> 'Industrial trucks – Safety'  <a href="#">CEN/TC 186</a> 'Industrial thermoprocessing – Safety'  <a href="#">CEN/TC 196</a> 'Mining machinery and equipment – Safety'  <a href="#">CEN/TC 198</a> 'Printing and paper machinery – Safety'  <a href="#">CEN/TC 202</a> 'Foundry machinery'  <a href="#">CEN/TC 223</a> 'Soil improvers and growing media'  <a href="#">CEN/TC 230</a> 'Water analysis'  <a href="#">CEN/TC 249</a> 'Plastics'  <a href="#">CEN/TC 260</a> 'Fertilizers and liming materials'  <a href="#">CEN/TC 261</a> 'Packaging'  <a href="#">CEN/TC 264</a> 'Air quality'  <a href="#">CEN/TC 248</a> 'Textiles and textile products'  <a href="#">CEN/TC 322</a> 'Equipments for making and shaping of metals - Safety requirements'  <a href="#">CEN/TC 411</a> 'Bio-based products'  <a href="#">CEN/TC 442</a> 'Building Information Modelling'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p><i>standards and the standardization needs with regards to plastics recycling and recycled plastics.</i></p> <p>In addition, the <a href="#">CEN-CENELEC SABE - Task Group Circular Economy</a> - is mapping the existing standards and standardization needs to foster a circular economy.</p> <p><a href="#">CEN/TC 261</a> has published two enquiry drafts supporting Directive 2015/720/EU to determine the compostability of light weight carrier bags (prEN 17427 and prEN 17428). In support of Directive 2019/904/EU a standardization request is expected in 2020 for a Work Item on 'Packaging — Test methods and requirements to demonstrate that plastic caps and lids of single use beverage containers with a capacity of up to three litres remain attached to the containers during the product's intended use stage'.</p> <p>To support the Circular economy and the European Green Deal, standardization activities are planned regarding quality grades and plastics recyclates.</p> <p>With regards to plastics in the environment <a href="#">CEN/TC 249</a> is coordinating with ISO on several standards, e.g. CEN ISO/TR 21960:2020 'Plastics - Environmental aspects - State of knowledge and methodologies', and is working on a Work Item on 'Plastics - Environmental aspects – Vocabulary' as a basis for further standardization activities.</p>	<p><a href="#">CEN/TC 444</a> 'Environmental characterization of solid matrices'</p> <p><a href="#">CEN/TC 454</a> 'Algae and algae products'</p> <p><a href="#">CEN/TC 455</a> 'Plant Bio stimulants'</p> <p><a href="#">CEN/TC 459</a> 'ECISS - European Committee for Iron and Steel Standardization'</p>
<p><b>MOBILITY- AUTOMOTIVE</b> CCMC contact: <a href="#">Thierry Legrand</a></p>			
<p><b>MOBILITY- AUTOMOTIVE</b> Production of motor vehicles, boats and trains, and accessories</p>	<p><a href="#">Regulation (EU) No 1315/2013</a> relating to the development of the trans-European transport network</p> <p><a href="#">Regulation (EU) No 1316/2013</a> establishing the Connecting Europe Facility</p> <p>Interoperability Directive (EU) 2016/797</p>	<p>CEN-CENELEC standardization program on motor vehicles production focus mainly on standards on alternative fuels, the cornerstone for cleaner motor vehicles. Following the work already done under <a href="#">M/533</a> and already anticipating the revision of Directive (EU) 2014/94, <a href="#">CEN/TC 301</a>, <a href="#">CEN/TC 326</a>, <a href="#">CEN/TC 268</a> and <a href="#">CEN/TC 286</a> will develop new standards on alternative fuels for vehicles, working not</p>	<p><a href="#">CEN/TC 15</a> 'Inland navigation vessels'</p> <p><a href="#">CEN/TC 23</a> 'Transportable gas cylinders'</p> <p><a href="#">CEN/TC 256</a> 'Railway applications'</p> <p><a href="#">CEN/TC 268</a> 'Cryogenic vessels and specific hydrogen technologies applications'</p> <p><a href="#">CEN/TC 270</a> 'Internal combustion engines'</p>



Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>only on fuelling standards but also on operation and cargo transfer standards. In this context, here are the standardization inputs on this dimension of the ecosystem:</p> <ul style="list-style-type: none"> <li>- On natural gas, <a href="#">CEN/TC 326</a> is actively developing standards on three fields - fuelling, operation, and cargo transfer – that would definitively support the acceleration of alternative fuels for motor vehicles. Particularly, two important projects are on track for development in the coming years: a standard on the requirements for NGV workshops and the management of liquefied natural gas (LNG) vehicles, a standard on LNG fuelling instructions.</li> <li>- On electricity as a fuel, <a href="#">CEN/TC 301</a> recently launched new projects on the vehicle-to-grid communication interface, contributing to a better integration of the cleaner vehicles to the electric ecosystem.</li> <li>- On LPG, <a href="#">CEN/TC 286</a> is currently working on the revision of the standard dedicated to the LPG propulsion systems for boats, yachts and other watercraft. <a href="#">CEN/TC 286</a> is also starting the revision of the standard on the installation requirements for Automotive LPG-systems.</li> <li>- On hydrogen, <a href="#">CEN/TC 268</a> is currently revising the standard related to the minimum requirements to ensure the interoperability of public hydrogen refuelling points</li> <li>- At the side of these inputs directly related to alternative fuels infrastructure, there is also CEN-CENELEC TCs active in standardization projects indirectly affecting alternative fuels infrastructure standardization: <a href="#">CEN/TC 23</a>, in charge of transportable gas cylinders, their fittings, and requirements relating to their design, testing and operation</li> </ul> <p>At the side of this dimension, CEN-CENELEC standardization program on railways applications is contributing massively to the development of safe, innovative and efficient rail infrastructure, rolling-stock and systems. <a href="#">CEN/TC 256</a> 'Railway applications' and <a href="#">CLC/TC 9X</a> 'Electrical and electronic applications for railways' have</p>	<p><a href="#">CEN/TC 286</a> 'Liquefied petroleum gas equipment and accessories'</p> <p><a href="#">CEN/TC 301</a> 'Road vehicles'</p> <p><a href="#">CEN/TC 326</a> 'Natural gas vehicles – Fuelling and operation'</p> <p><a href="#">CEN/TC 436</a> 'Cabin Air Quality on civil aircraft - Chemical Agents'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CEN/TC 464</a> 'Small craft'</p> <p><a href="#">CLC/TC 9X</a> 'Electrical and electronic applications for railways'</p> <p><a href="#">CEN-CLC/JTC 20</a> 'Hyperloop systems'</p> <p>CEN-CLC <a href="#">Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy storage</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>numerous new deliverables projects on tracks that will address technical aspects (interoperability and safety) of Railway systems especially in the context of the new standardization request on rail interoperability. Future projects of the Rail standardization can also feed the 'Mobility ecosystem' of the EU recovery plan as they drag important new topics crucial for the production of the train in the future: Cybersecurity, autonomous operation, optimized interfaces between the subsystems of the railway system, and the facilitation of the use of 'simulation' in the place of 'physical testing' for established requirements.</p> <p>More precisely, we expect new and updated standards to support rail developments in the following fields:</p> <ul style="list-style-type: none"> <li>- Digitalisation and automation, multimodality and mobility as a service (MAAS) for the mobility sector as a whole, and for rail as a central part of it;</li> <li>- Cybersecurity specifically for rail: essential developments include ERTMS and the so-called game changers (ATO, FRMCS,...) as well as the system modular architecture and integrated traffic management;</li> <li>- Digital Automatic Couplers for freight wagons and innovative solutions for intermodal and combined transport, Virtual Certification (eg the use of simulation for the authorisation process), Condition Based Maintenance, and the use of new materials and alternative fuels (batteries, hydrogen and fuel cells,...),... will also be essential to ensure the future competitiveness of rail for both freight and passengers.</li> </ul> <p>Also, the newly set-up <a href="#">CEN-CENELEC JTC 20</a> on Hyperloop systems can play a role in the standards feeding this ecosystem, by developing deliverables on a new kind of motor vehicle.</p> <p>Deliverables from <a href="#">CEN/TC 256</a>, who will address technical aspects (interoperability and safety) of Railway systems while giving a dedicated focus on the legislative framework.</p>	

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>Standards of <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p>Work of CEN-CLC <a href="#">Sector Forum Energy Efficiency-Energy Transition</a>, WG on <b>Hydrogen</b>, that will address requirements and needs for hydrogen applications in the train, maritime (including inland navigation), heavy trucks and aviation sectors.</p> <p>In the field of <b>Propulsion batteries</b>, CEN &amp; CENELEC will address the future Standardization Request on Performance and sustainability requirements for rechargeable batteries with internal storage.</p>	
<p><b>MOBILITY- AUTOMOTIVE</b> Their repair and maintenance</p>	<p><a href="#">Regulation (EU) No 1315/2013</a> relating to the development of the trans-European transport network</p> <p><a href="#">Regulation (EU) No 1316/2013</a> establishing the Connecting Europe Facility</p> <p>Interoperability Directive (EU) 2016/797</p> <p><a href="#">Regulation (EC) No 715/2007</a> on access to vehicle repair and maintenance information and Regulation (EC) No 858/2018 who amended it.</p> <p><a href="#">M/421</a> - Vehicle OBD, repair and maintenance information</p>	<p>CEN &amp; CENELEC can bring a significant standardization input on the repair and maintenance of road vehicles through standardization of on-board diagnostic systems. The central project in this field is the revision process of the Repair and Maintenance (RMI) package standards in the context of <a href="#">M/421</a>. On this point, <a href="#">CEN/TC 301</a> is currently planning the revision process of the dedicated standard series at the light of the impact of the Regulation (EU) 2018/858.</p> <p>In parallel, <a href="#">CEN/TC 301</a> and <a href="#">CLC/TC 9X</a> also follow the development of the draft Standardization Request on Batteries and has a reflexion on how they could contribute to the elaboration of new deliverables under this framework as this new standardization request will impact massively the production, repair and maintenance of road and rail vehicles using batteries.</p> <p>Deliverables from <a href="#">CEN/TC 326</a> that will address workshops for natural gas vehicles fuelled with CNG (revision of EN 13423:2000 'CNG vehicle operations') and LNG (NWI in preparation).</p>	<p><a href="#">CEN/TC 242</a> 'Safety requirements for passenger transportation by rope'</p> <p><a href="#">CEN/TC 274</a> 'Aircraft ground support equipment'</p> <p><a href="#">CEN/TC 436</a> 'Cabin Air Quality on civil aircraft - Chemical Agents'</p> <p><a href="#">CEN/TC 256</a> 'Railway applications'</p> <p><a href="#">CEN/TC 301</a> 'Road vehicles'</p> <p><a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'</p> <p><a href="#">CEN/TC 326</a> 'Natural Gas Vehicles – Fuelling and operation'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CEN/TC 464</a> 'Small craft'</p> <p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'</p> <p>CEN-CLC <a href="#">Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>Standards from <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p>Work of <a href="#">CEN-CLC/JTC 14</a>: Revision of EN 16247-4 'Energy audits: transports'</p> <p>Work of CEN-CLC <a href="#">Sector Forum Energy Efficiency -Energy Transition</a>, WG on <b>Hydrogen</b>, that will address requirements and needs for hydrogen applications in the train, maritime (including inland navigation), heavy trucks and aviation sectors.</p>	<p>storage <a href="#">CLC/TC 9X</a> 'Electrical and electronic applications for railways'</p>
<p><b>MOBILITY- AUTOMOTIVE</b> <b>Freight transport</b></p>	<p><a href="#">Regulation (EU) No 1315/2013</a> relating to the development of the trans-European transport network</p> <p><a href="#">Regulation (EU) No 1316/2013</a> establishing the Connecting Europe Facility</p> <p>Interoperability Directive (EU) 2016/797</p> <p>Expected revision of Combined Transport Directive 92/106/EEC</p>	<p>CEN/TC 119 is currently thinking and debating about an ambitious revision of European swap bodies standards for intermodal loading units. This initiative could feed the technical requirements in the project of revision of the <b>Combined Transport Directive</b> in the context of the <b>Green Deal Strategy</b>.</p> <p>At the side of road freight transport, the railway sector is also active on freight standards. <a href="#">CEN/TC 256</a> and <a href="#">CLC/TC 9X</a>, notably in the context of interoperability – but not only, are developing standards facilitating the shift to rail of freight transport</p> <p>Deliverables from <a href="#">CEN/TC 326</a> that will address safety requirement for the transport and delivery of LNG as automotive fuel (2 Work Items in preparation on ESD and connectors for LNG tanker truck, terminal and fuelling station).</p> <p>Standards of <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and</p>	<p><a href="#">CEN/TC 256</a> 'Railway applications'</p> <p><a href="#">CEN/TC 274</a> 'Aircraft ground support equipment'</p> <p><a href="#">CEN/TC 119</a> 'Swap bodies for combined goods transport'</p> <p>CEN/TC 278 'Intelligent transport systems'</p> <p><a href="#">CEN/TC 326</a> 'Natural Gas Vehicles – Fuelling and operation'</p> <p><a href="#">CEN/TC 377</a> 'Air Traffic Management'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'</p> <p>CEN-CLC <a href="#">Sector Forum Energy Efficiency - Energy Transition</a>, including WG on Energy storage</p> <p><a href="#">CLC/TC 9X</a> 'Electrical and electronic</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>other manmade constructions.</p> <p>Work of <a href="#">CEN-CLC/JTC 14</a>:</p> <p>Revision of EN 16247-4 'Energy audits: transports'</p> <p>Work of CEN-CLC <a href="#">Sector Forum Energy Efficiency-Energy Transition</a>, WG on hydrogen, that will address requirements and needs for hydrogen applications in the train, maritime (including inland navigation), heavy trucks and aviation sectors.</p>	<p>applications for railways'</p>
<p><b>ELECTRONICS</b> CCMC contact: <a href="#">Geert Maes</a></p>			
<p><b>ELECTRONICS</b> Production of electronics</p>	<p><a href="#">Low-Voltage Directive 2014/35/EU</a> <a href="#">PPE Regulation (EU) No 2016/425</a> Machinery Directive 2006/42/EC 2011/65/EC RoHS 2012/19/EC WEEE Directive 2008/98/EC Waste Framework Directive 2006/66/EC Battery Directive 2009/125/EC Ecodesign Directive</p>	<p>Work of <a href="#">CLC/TC 23BX</a> on HBES and Sensors Work of <a href="#">CLC/TC 79</a> on Door entry systems Work of <a href="#">CLC/TC 85X</a> on Measuring equipment Work of <a href="#">CLC/TC 108X</a> &amp; <a href="#">CLC/TC 100X</a> linked to HBES and Power supplies (USB) Work of <a href="#">CLC/TC 205</a> on Safety and EMC of HBES/BACS (EN 63044 series). Work of <a href="#">CLC/TC 210</a>: Electromagnetic compatibility standards encompassing Emission (for protection of the radio spectrum) and Immunity (for assurance of continued correct operation of products in the presence of electromagnetic disturbances) Standards of <a href="#">CEN/TC 442</a> in support to digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions. <a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products. <a href="#">CEN/TC 442</a> will deliver standards to support other construction sector CEN TC's with data structures to make their standard to support digitalization of the construction sector.</p>	<p>All TCs developing standards relating to LV installations <a href="#">CEN-CLC/JTC 10</a> 'Energy-related products - Material Efficiency Aspects for Ecodesign' <a href="#">CLC/TC 23BX</a> 'Switches, boxes and enclosures for household and similar purposes, plugs and socket outlet for D.C.' <a href="#">CLC/TC 61</a> 'Safety of household and similar electrical appliances' <a href="#">CLC/TC 79</a> 'Alarm systems' <a href="#">CLC/TC 85X</a> 'Measuring equipment for electrical and electromagnetic Quantities' <a href="#">CLC/TC 100X</a> 'Audio, video and multimedia systems and equipment and related sub-systems' <a href="#">CLC/TC 108X</a> 'Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology' <a href="#">CLC/TC 111X</a> 'Environment' <a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)' <a href="#">CLC/TC 210</a> 'EMC'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
			<a href="#">CEN/TC 49</a> 'Gas cooking appliances' <a href="#">CEN/TC 62</a> 'Independent gas-fired space heaters' <a href="#">CEN/TC 106</a> 'Large kitchen appliances using gaseous fuels' <a href="#">CEN/TC 114</a> 'Safety of machinery' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications' <a href="#">CEN/TC 442</a> 'Building Information Modelling'
<b>TEXTILES</b> CCMC contact: <a href="#">Claire Dalier</a>			
<b>TEXTILES</b> Production of textiles, wearing apparel, footwear, leather and, jewellery	<a href="#">European Green Deal Directive 2019/904/EU</a> on Reduction of the impact of certain plastic products on the environment.	<p><i>NOTE:</i>            CEN supported this topic in the <b>final AUWP 2020</b>. CEN expects a Standardization Request relating to the circular design of fishing gear to encourage preparing for re-use and facilitate recyclability at end of life.</p> <p>Activities of <a href="#">CEN/TC 248</a>:            New work item proposals in CEN/TC 248 (and its ISO mirror committee ISO/TC 38 „Textiles’) to determine microplastics from textile sources supporting a better understanding of (micro-)plastics sources (one under CEN lead, part two under ISO lead):</p> <ul style="list-style-type: none"> <li>- EN (ISO) 4484-1, Textiles and textile products – Microplastics from textile sources - Part 1: Determination of fibre loss from fabrics during washing</li> <li>- (EN) ISO 4484-2, Textiles and textile products – Microplastics from textile sources - Part 2: Qualitative and quantitative evaluation of microplastics</li> </ul> <p>Recycling of especially apparel indeed requires standardization. It is already done to some extent:</p> <ul style="list-style-type: none"> <li>- Re-use of used apparel</li> </ul>	<a href="#">CEN/TC 214</a> 'Textile machinery and accessories' <a href="#">CEN/TC 248</a> 'Textiles and textile products' <a href="#">CEN/TC 249</a> 'Plastics' <a href="#">CEN/TC 230</a> 'Water analysis' <a href="#">CEN/TC 444</a> 'Environmental characterization of solid matrices' <a href="#">CEN/TC 264</a> 'Air quality' <a href="#">CLC/TC 59X</a> 'Performance of household and similar electrical appliances' (washing machines) <a href="#">CEN/TC 309</a> 'Footwear' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<ul style="list-style-type: none"> <li>- Use of fibres from used material for nonwoven</li> <li>- Use of fibres from used material to again make yarn</li> </ul> <p>However, the total portion of apparel that is recycled is quite low. And when it is done, it typically leads to a rather low-end product or the recycled fibres are used to substitute some of the virgin fibre without changing the properties of the yarn/fabric.</p> <p>The technical properties of a textile made out of a larger proportion of recycled fibres will be inferior to the ones made of virgin fibres. However, they have a superior ecologic footprint. This might not be important for technical textiles, for apparel it is. There is a tendency that customers take more care of this topic. This gives the chance for yarn and in consequence clothes made of recycled fibres to leave the low-end/low-price area and thus make these products more interesting for manufacturers.</p> <p>But in the current situation, there is no standardized labelling of clothes made of recycled material. It even starts with the definition of the term 'recycled'. This could mean that someone is collecting used textiles and converts them again to new textiles. However, it could also mean that the manufactures simply uses its own production waste somewhere else in the process.</p> <p>A standardized labelling for clothes and the intermediate products (fabric, yarn or even the bales of recycled fibers) will lead to more safety and awareness through the whole process chain up to the end customer. And in consequence could help to increase the amount of recycled fibers that are used.</p>	
<p><b>AEROSPACE AND DEFENCE</b> CCMC contact: <a href="#">Thierry Legrand</a></p>			
<p><b>AEROSPACE AND DEFENCE</b> Aircraft and spacecraft production</p>	<p><a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy</p>	<p>In collaboration with ASD-STAN and other CEN or CENELEC TCs having developed electrical power supply and hydrogen supply, the big prospect for the future is the development of hydrogen or electrical (or hybrid) propelled</p>	<p><a href="#">CEN/TC 143</a> 'Machine Tools – Safety' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		aircraft.	<a href="#">CEN/TC 377</a> 'Air Traffic Management' <a href="#">CEN-CLC/JTC 5</a> 'Space' <a href="#">CEN/WS 98</a> Bionic Aircraft - ALM technology and bionic design
<b>AEROSPACE AND DEFENCE</b> Military and weapons	<a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy		<a href="#">CLC/BTTF 133-1</a> 'Sound systems for emergency purposes which are not part of fire detection and alarm systems' <a href="#">CEN/WS D-Box</a> 'Demining tool-box for humanitarian clearing of large scale areas from anti-personnel landmines and cluster munitions' <a href="#">CEN/WS TER-CDM</a> 'Terminologies in Crisis and Disaster Management' <a href="#">CEN-CLC/WS ZONeSEC</a> 'Interoperability of security systems for the surveillance of widezones'
<b>AEROSPACE AND DEFENCE</b> Satellites	<a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy	Activities of <a href="#">CEN-CLC/JTC 5</a> : <ul style="list-style-type: none"> <li>- Current development and prospection of new Galileo applications</li> <li>- Development of the EN 16803 series standards to support Global Navigation Satellite Systems (GNSS)</li> </ul>	<a href="#">CEN-CLC/JTC 5</a> 'Space'
<b>CREATIVE AND CULTURAL INDUSTRIES</b> CCMC contact: <a href="#">Christina Thorngreen</a>			
<b>CREATIVE AND CULTURAL INDUSTRIES</b> Newspapers, books and periodicals		CWA by <a href="#">CEN/WS 'Journalism Trust Indicators'</a>	<a href="#">CEN/WS 'Journalism Trust Indicators'</a>
<b>CREATIVE AND CULTURAL INDUSTRIES</b> Motion picture, video and television		Work of <a href="#">CEN/TC 433</a> relating to safety and code of practice for theatres, productions and other events. Work of <a href="#">CEN/TC 457</a> regarding the long-term preservation of digital cinematography works, notably the development of a prEN on 'Framework for digital preservation of cinematographic works - The CEN Preservation Package'	<a href="#">CEN/TC 433</a> 'Entertainment technology - Machinery, equipment and installations' <a href="#">CEN/TC 457</a> 'Digital preservation of cinematographic works'



Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
<b>CREATIVE AND CULTURAL INDUSTRIES</b> Radio and music			
<b>TOURISM</b> CCMC contact: <a href="#">Christina Thorngreen</a>			
<b>TOURISM</b> Passenger transport and travel	<a href="#">A new Industrial Strategy for a green and digital Europe</a> EU Industrial Strategy	<a href="#">CEN/TC 329</a> will carefully monitor the actions taken at ISO level and the new projects within ISO/TC 228 'Tourism and related services' for possible adoption at European level.	<a href="#">CEN/TC 329</a> 'Tourism services'
<b>TOURISM</b> Hotels, short term accommodation		<a href="#">CEN/TC 329</a> will carefully monitor the actions taken at ISO level and the new projects within ISO/TC 228 'Tourism and related services' for possible adoption at European level.	<a href="#">CEN/TC 329</a> 'Tourism services'
<b>TOURISM</b> Restaurants and catering		<a href="#">CEN/TC 329</a> will carefully monitor the actions taken at ISO level and the new projects within ISO/TC 228 'Tourism and related services' for possible adoption at European level.	<a href="#">CEN/TC 329</a> 'Tourism services'
<b>TOURISM</b> Events, theme parks		<a href="#">CEN/TC 329</a> will carefully monitor the actions taken at ISO level and the new projects within ISO/TC 228 'Tourism and related services' for possible adoption at European level.	<a href="#">CEN/TC 329</a> 'Tourism services'
<b>PROXIMITY AND SOCIAL ECONOMY</b> CCMC contact: <a href="#">Catherine Vigneron</a>			
<b>PROXIMITY AND SOCIAL ECONOMY</b> Social enterprises, associations and cooperatives aiming at generating a social impact, often proximity based	Upcoming European legislation on Accessibility Regulation (EC) 1107/2006 Upcoming Standardization Request related to the European Accessibility Directive (EU) 2019/882	<b>NOTE:</b> <i>Standardization of the service chain focuses on processes for technology-enabled care. The standards work underpins European policies on Active and Healthy Ageing (AHA) and it aims at ensuring that alarm users benefit from an improved level of quality of life by enabling them to stay longer in their own homes, remain independent and be able to participate actively in society.</i> <a href="#">CEN/TC 391</a> is defining a European Standard setting out requirements and guidance for management with strategic responsibilities (C levels) for the delivery of a crisis management capability.	<a href="#">CEN/TC 10</a> 'Lifts, escalators and moving walks' <a href="#">CEN/TC 122</a> 'Ergonomics' <a href="#">CEN/TC 293</a> 'Assistive products and accessibility' <a href="#">CEN/TC 320</a> 'Transport – Logistics and services' <a href="#">CEN/TC 325</a> 'Crime prevention through building, facility and area design' <a href="#">CEN/TC 391</a> 'Societal and citizen security' <a href="#">CEN/TC 431</a> 'Service Chain for Social Care'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>In the <b>Accessibility</b> field, CEN-CLC Strategic Advisory Group on Accessibility (<b>SAGA</b>) will contribute to the harmonization of the approaches that manufacturers and service providers worldwide currently use to comply with accessibility requirements whenever they produce/provide products and services with specific accessibility features. That will ensure that persons with disabilities have access to products and services in the internal market.</p> <p>Work of <a href="#">CEN/TC 442</a> which coordinates digitalization across the construction sector. Technical equipment supporting AHA policies should be an integrated part of the digital representation of the built environment.</p> <p>Work of <a href="#">CEN/TC 452</a>, whose priority is to publish European assistance dog training standards that will result in the training of assistance dogs with consistent and high standards (both guidance and assistance skills) which will secure and maintain freedom of movement for assistance dog users both within and between European countries. The European standard on Assistance dogs will improve the functioning of the internal market for accessible products and services and will for sure support the European Accessibility Act in removing barriers created by divergent legislation.</p> <p>Work of <a href="#">CEN/TC 325</a>, which is defining a European Standard setting out requirements and guidance for management listing 15 crime prevention strategies, the guidelines and information for different types of urban environments, including an overview of measures which is therefore the most important European standard in the field of urban crime prevention. The use of it is particularly suitable for planning environments and buildings with regard to safety criteria.</p>	<p>Alarms'</p> <p><a href="#">CEN/TC 435</a> 'Tattooing services'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CEN/TC 452</a> 'Assistance Dogs'</p> <p><a href="#">CEN-CLC JTC 11</a> 'Accessibility in the built environment'</p> <p><a href="#">CEN-CLC JTC 12</a> 'Design for All'</p>
<b>RETAIL</b>			
<b>RETAIL</b> Retail sales			<a href="#">CEN/TC 261</a> 'Packaging' <a href="#">CEN/TC 368</a> 'Product Identification'
<b>RETAIL</b>			<a href="#">CEN/TC 261</a> 'Packaging'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
Wholesale connected to consumers			<a href="#">CEN/TC 263</a> 'Secure storage of cash, valuables and data media'
<b>CONSTRUCTION</b> CCMC contact: <a href="#">Nuno Pargana</a>			
<b>CONSTRUCTION</b> <b>Building of residential and non-residential estates</b>	<a href="#">Construction Products Regulation</a> (CPR) 'Renovation wave' initiative (in the remit of the Green Deal) New ' <a href="#">Circular economy action plan</a> ' Directive 2018/2001 RED II Guarantee of origin of heating and cooling	<b>General remark:</b> In the construction sector most CEN/TCs develop product standards under the CPR with the main aim to ensure building safety and enhance the trade on the European market. Currently the EC is scrutinizing the CPR and is taking a rather legalistic approach in the assessment of standards which are candidates for harmonization under CPR. This leads to the fact that while CEN/TCs in the construction sector have ample work programs and show high activity, citation in the Official Journal under CPR has almost not been possible in the past years. As a consequence, activities in support of the Ecosystem 'Construction' is currently restricted by the European framework. Rather than focusing on single activities of CEN/TCs, measures (of the EC) taken on a larger, more general scale could be a way forward for the whole construction industry and the Ecosystem could have a direct benefit. <b>Activities:</b> Standards will be developed covering methods and criteria for construction products in relation to their performance. These standards, intended to be harmonised in support of the CPR, will contribute to the placing of construction products in the European market. In relation to the 'Renovation wave' initiative and the new 'Circular economy action plan' <a href="#">CEN/TC 350</a> is providing, through EN 15804:2019, the horizontal assessment method for the sustainability performance of construction products that are in coherence with the common European approach for life-cycle calculation in the construction sector enabling	<a href="#">CEN/TC 112</a> 'Wood-based panels' <a href="#">CEN/TC 125</a> 'Masonry' <a href="#">CEN/TC 128</a> 'Roof covering products for discontinuous laying and products for wall cladding' <a href="#">CEN/TC 33</a> 'Doors, windows, shutters, building hardware and curtain walling' <a href="#">CEN/TC 51</a> 'Cement and building limes' <a href="#">CEN/TC 67</a> 'Ceramic tiles' <a href="#">CEN/TC 88</a> 'Thermal insulating materials and products' <a href="#">CEN/TC 99</a> 'Wallcoverings' <a href="#">CEN/TC 113</a> 'Heat pumps and air conditioning units' <a href="#">CEN/TC 129</a> 'Glass in building' <a href="#">CEN/TC 134</a> 'Resilient, textile and laminate floor coverings' <a href="#">CEN/TC 151</a> 'Construction equipment and building material machines – Safety' <a href="#">CEN/TC 154</a> 'Aggregates' <a href="#">CEN/TC 163</a> 'Sanitary appliances' <a href="#">CEN/TC 166</a> 'Chimneys' <a href="#">CEN/TC 169</a> 'Light and lighting' <a href="#">CEN/TC 178</a> 'Paving units and kerbs' <a href="#">CEN/TC 185</a> 'Fasteners' <a href="#">CEN/TC 217</a> 'Surfaces for sports areas' <a href="#">CEN/TC 229</a> 'Precast concrete products'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>the use of data at the building level assessment. This will allow a good functioning of the internal market of these products and to enable rewarding technological research and innovation to support the renovation and construction of high energy efficient buildings with the performance-based approach.</p> <p><a href="#">CEN/TC 312</a> &amp; <a href="#">CEN/TC 113</a> work:</p> <p>Concert the activities from different heating technologies to realize a quick, fair, economic and sustainable transition in the heating and cooling sector. Bring them together.</p> <p><a href="#">CEN-CLC/JTC 14</a> work:</p> <ul style="list-style-type: none"> <li>- Revision of EN 16325 'Guarantees of origin related to energy. Guarantee of origin for electricity' to take into account requirement of Art. 19 of 2018/2001 Directive. (Hydrogen, Biomethane and other gases, heating and cooling)</li> <li>- prEN 17463 Methodology for Valuation of Energy Related Investment</li> <li>- prEN xxxxx. Energy Performance Contracting – Minimum requirements</li> <li>- Revision of EN 16247-1 and 2 'Energy audits – general and buildings</li> </ul> <p>CWA from <a href="#">CEN/WS 107</a> – Mitigation of Urban Heat Island effects with cool materials</p> <p><a href="#">CEN/TC 442</a> standards that support digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p><a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.</p> <p>In relation to the 'Renovation wave' initiative <a href="#">CEN/TC 169</a> will work on the revision of EN 12464-1 on the lighting installed in</p>	<p><a href="#">CEN/TC 241</a> 'Gypsum and gypsum based products'</p> <p><a href="#">CEN/TC 246</a> 'Natural stones'</p> <p><a href="#">CEN/TC 254</a> 'Flexible sheets for waterproofing'</p> <p><a href="#">CEN/TC 277</a> 'Suspended ceilings'</p> <p><a href="#">CEN/TC 297</a> 'Free-standing industrial chimneys'</p> <p><a href="#">CEN/TC 303</a> 'Floor screeds and screed materials'</p> <p><a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'</p> <p><a href="#">CEN/TC 312</a> 'Thermal solar systems and components'</p> <p><a href="#">CEN/TC 349</a> 'Sealants for joints in building construction'</p> <p><a href="#">CEN/TC 350</a> 'Sustainability in construction work'</p> <p><a href="#">CEN/TC 357</a> 'Stretched ceilings'</p> <p><a href="#">CEN/TC 361</a> 'Polymer modified bituminous thick coatings for waterproofing - Definitions/requirements and test methods'</p> <p><a href="#">CEN/TC 442</a> 'Building Information Modelling'</p> <p><a href="#">CEN-CLC/JTC 14</a> 'Energy management and energy efficiency in the framework of energy transition'</p> <p><a href="#">CEN/WS 107</a> 'Mitigation of Urban Heat Island effects with cool materials'</p> <p><a href="#">CLC/TC 205</a> 'Home and Building Electronic Systems (HBES)'</p> <p><a href="#">CLC/TC 23BX</a> 'Switches, boxes and enclosures for household and similar</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		buildings. Work of <a href="#">CLC/TC 205</a> on HBES Work of <a href="#">CLC/TC 23BX</a> and <a href="#">CLC/TC 72</a> on Thermostats	purposes, plugs and socket outlet for D.C.' <a href="#">CLC/TC 72</a> 'Automatic electrical controls'
<b>CONSTRUCTION</b> <b>Building of roads and railways</b>	<a href="#">Construction Products Regulation</a> (CPR)	Standards will be developed or improved covering methods and criteria for construction products in relation to their performance. These standards, namely updated product specification standards intended to be harmonised in support of the CPR will contribute to the placing of construction products in the European market to be used for the construction and maintenance of roads, airfields and other paved areas.  <a href="#">CEN/TC 442</a> standards that support digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions. <a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.	<a href="#">CEN/TC 151</a> 'Construction equipment and building material machines – Safety' <a href="#">CEN/TC 227</a> 'Road materials' <a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications' <a href="#">CEN/TC 336</a> 'Bituminous binders' <a href="#">CEN/TC 442</a> 'Building Information Modelling'
<b>CONSTRUCTION</b> <b>Building of utilities and civil engineering</b>	<a href="#">Construction Products Regulation</a> (CPR) Upcoming legislation in relation to the EU Green deal and the New Circular Economy Action Plan	The 59 Structural Eurocodes parts produced by <a href="#">CEN/TC 250</a> provide rules for principles of design, actions on structures, geotechnical design and structural design rules for the use of all major materials, such as concrete, steel, composite steel and concrete, timber, masonry, and aluminium which are under revision and will be prepared in reply to Standardization Request <a href="#">M/515</a> .  Standards will be developed in support of the CPR covering methods and criteria for the performance of 'reinforcing and pre-stressing steel' in relation to their essential characteristics, including environmental performance. In this regards a standardization request for 'reinforcing and pre-stressing steel' is under development. <a href="#">CEN/TC 442</a> standards that support digitalization in the construction sector from idea to end of life for any built asset.	<a href="#">CEN/WS 'Smart CE marking for the construction industry'</a> <a href="#">CEN/TC 50</a> 'Lighting columns and spigots' <a href="#">CEN/TC 53</a> 'Temporary works equipment' <a href="#">CEN/TC 104</a> 'Concrete and related products' <a href="#">CEN/TC 112</a> 'Wood-based panels' <a href="#">CEN/TC 124</a> 'Timber structures' <a href="#">CEN/TC 125</a> 'Masonry' <a href="#">CEN/TC 128</a> 'Roof covering products for discontinuous laying and products for wall cladding' <a href="#">CEN/TC 129</a> 'Glass in building' <a href="#">CEN/TC 134</a> 'Resilient, textile and laminate'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p>The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p><a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.</p> <p><a href="#">CEN/TC 442</a> will deliver standards to support other construction sector CEN TC's with data structures to make their standard to support digitalization of the construction sector</p> <p>A <b>new area for standardization</b> is being discussed: 'Standardization in the field of circular economy in the construction sector specifying circular principles, guidelines, and requirements from design to demolition for stakeholders in all phases of the value chain.'</p>	<p>floor coverings'</p> <p><a href="#">CEN/TC 135</a> 'Execution of steel structures and aluminium structures'</p> <p><a href="#">CEN/TC 151</a> 'Construction equipment and building material machines – Safety'</p> <p><a href="#">CEN/TC 154</a> 'Aggregates'</p> <p><a href="#">CEN/TC 163</a> 'Sanitary appliances'</p> <p><a href="#">CEN/TC 166</a> 'Chimneys'</p> <p><a href="#">CEN/TC 167</a> 'Structural bearings'</p> <p><a href="#">CEN/TC 175</a> 'Round and sawn timber'</p> <p><a href="#">CEN/TC 177</a> 'Prefabricated reinforced components of autoclaved aerated concrete or light-weight aggregate concrete with open structure'</p> <p><a href="#">CEN/TC 178</a> 'Paving units and kerbs'</p> <p><a href="#">CEN/TC 185</a> 'Fasteners'</p> <p><a href="#">CEN/TC 187</a> 'Refractory products and materials'</p> <p><a href="#">CEN/TC 189</a> 'Geosynthetics'</p> <p><a href="#">CEN/TC 203</a> 'Cast iron pipes, fittings and their joints'</p> <p><a href="#">CEN/TC 208</a> 'Elastomeric seals for joints in pipework and pipelines'</p> <p><a href="#">CEN/TC 217</a> 'Surfaces for sports areas'</p> <p><a href="#">CEN/TC 218</a> 'Rubber and plastics hoses and hose assemblies'</p> <p><a href="#">CEN/TC 250</a> Structural Eurocodes</p> <p><a href="#">CEN/TC 288</a> 'Execution of special geotechnical works'</p> <p><a href="#">CEN/TC 310</a> 'Advanced Automation Technologies and their applications'</p> <p><a href="#">CEN/TC 340</a> 'Anti-seismic devices'</p>

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
			<a href="#">CEN/TC 350</a> 'Sustainability in construction work' <a href="#">CEN/TC 442</a> 'Building Information Modelling'
<b>CONSTRUCTION</b> Associated activities	<a href="#">Construction Products Regulation</a>	<p>Standards will be developed in support of the CPR covering methods and criteria for the performance of 'space heating appliances' in relation to their essential characteristics, including environmental performance. In this regards a standardization request for Space heating appliances is under development.</p> <p><a href="#">CEN/TC 350</a> will develop standards in the field of sustainability performance of construction products and buildings.</p> <p><a href="#">CEN/TC 351</a> will continue working on deliverables addressing emissions into indoor air, assessment of gamma radiation, ecotoxicity of eluates, content of substances, leaching and percolation tests</p> <p><a href="#">CEN/TC 340</a> will work on the revision of EN 15129:2018 'Anti-seismic devices' in order to make it compliant to CPR and suitable for citation in the OJEU. The TC is working on splitting the standard in 6 parts and is currently focusing on the 6th part 'Anti-seismic devices - Part 6 - Sliding Isolators'.</p> <p><a href="#">CEN/TC 442</a> standards that support digitalization in the construction sector from idea to end of life for any built asset. The standards cover digitalization of processes and representation of digital twins, buildings, infrastructure and other manmade constructions.</p> <p><a href="#">CEN/TC 442</a> has developed standards that support a digital marked for construction products.</p> <p><a href="#">CEN/TC 442</a> will deliver standards to support other construction sector CEN TC's with data structures to make their standard to support digitalization of the construction sector</p>	<a href="#">CEN/TC 46</a> 'Fireplaces for liquid fuels' <a href="#">CEN/TC 142</a> 'Woodworking machines – Safety' <a href="#">CEN/TC 151</a> 'Construction equipment and building material machines – Safety' <a href="#">CEN/TC 156</a> 'Ventilation for buildings' <a href="#">CEN/TC 186</a> 'Industrial thermoprocessing – Safety' <a href="#">CEN/TC 189</a> 'Geosynthetics' <a href="#">CEN/TC 228</a> 'Heating systems and water-based cooling systems in buildings' <a href="#">CEN/TC 295</a> 'Residential solid fuel burning appliances' <a href="#">CEN/TC 340</a> 'Anti-seismic devices' CEN/TC 346 'Conservation of Cultural Heritage' <a href="#">CEN/TC 350</a> 'Sustainability of construction works' <a href="#">CEN/TC 351</a> 'Construction Products - Assessment of release of dangerous substances' <a href="#">CEN/TC 422</a> 'Side curtains ventilation systems - Safety' <a href="#">CEN/TC 442</a> 'Building Information Modelling'

Ecosystems identified with subgroups	Other related EU policy/ legislation	Identified activities in support of the Ecosystems	Technical groups (that could be) relevant for activities within the Ecosystems (not exhaustive)
		<p><a href="#">CEN/TC 88</a>: Drafting of a Standardisation Request as soon as possible replacing M/103 to enable harmonized standardisation in the field of thermal insulating materials. An Internal Market with clear and up-to-date rules would support the recovery of the Construction Product Sector in this field.</p>	