



Project no. 319055
SUSTA SMART

WP1 deliverables Summary

Overview of research projects and relevant standardization bodies

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Executive Summary

The purpose of this document is to summarize and dispose to public availability all relevant information related to public deliverables of WP1 of SUSTA-SMART project. Originally, deliverables D1.3 and D1.4, which is an update of the first one, are the public deliverables that will be summarized in this document.

This document is then an overview on the screened research projects and relevant standardisation bodies and actions performed by SUSTA-SMART consortium until the M18 (final month) of execution of the project. This information is presented as a set of tables both for the most relevant identified research projects and standardisation bodies.

1. Introduction

Within the scope of tasks performed during WP1 of SUSTA-SMART project, two major actions were performed:

- A list of projects of interest to perform a screening on their standardisation needs and standardisation actions performed within each project were defined. SUSTA-SMART has been focusing on these research projects, which are in one of the domains of interest of SUSTA-SMART (PPEs, construction and consumer goods). For each of these projects a screening on their standardisation needs and relevant actions performed towards standardization was prepared.
- A list of relevant entities or working groups involved in the definition of standards related to the domain of the defined working groups of interest of the scope of SUSTA-SMART project was compiled when they were considered to be of interest to the scope work fields.

Due to how standardization bodies are structured, the way to work and identify both research projects of interest for SUSTA-SMART and standardization bodies was based on the mentioned scope of the three domains: PPEs, construction and consumer goods.

2. Overview of screened research projects

First task performed for the screening of relevant research projects of interest for SUSTA-SMART was the definition of the list of projects involving a development with smart textiles in any of the considered domains of interest.

Finally, including projects already mentioned in SUSTA-SMART proposal, and projects found during screening, 25 projects were identified to be screened representing a meaningful amount of projects for each of the relevant domains.

As described on the proposal, this list has been categorized and classified according to three main criteria:

- Domain of interest considered in SUSTA-SMART.
 - Personal protective equipment (PPEs).
 - Construction.
 - Consumer goods.
- Relationship of SUSTA-SMART partners with each project:
 - One or more SUSTA-SMART partners involved.
 - No SUSTA-SMART partners involved but with connections to a third involved partner on that project.
 - No SUSTA-SMART partners involved without any connection to any partner on that project.
- Status of the project:
 - Running.
 - Finished.

Specially second and third criteria were important to take into account when contacting project coordinator or partners to identify the standardisation needs for each project. FP6 and FP7 program projects and their subprograms were defined to be the most relevant for the creation of the list of research projects to be screened. This update has followed also the projects appearing in FP7 program related to the topics of interest to be included in the final update report.

The result of the overview is summarized on a table with these fields.

- General information: General information for each project. Projects are classified and divided by domains. General information includes:
 - Number: A number to identify the project.
 - Name: Name of the project considered to be part of the list of screened projects and program funding this project.
 - Status: Indication about if the project is running or finished, with the date on which the project will finish or finished in case is already finished.

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- **Partners' involvement:** This set of fields provides info about the relationship of SUSTA-SMART project partners and supporting companies with each of the considered projects. It is divided in:
 - **SUSTA-SMART partners involved:** In the case a SUSTA-SMART partner is involved on any of the projects listed, that partner will be mentioned here to have a direct relationship with that project. In the case that any SUSTA-SMART partners is involved in a project, a mention on this field of the partner that is following the project will be shown.
 - **Relevant non SUSTA-SMART partners:** For each project this field will mention relevant project consortium partners (e.g. Coordinators, WP leaders, Partners in charge of standardisation issues, etc.) especially when any SUSTA-SMART partner has a relationship with other partner of that project consortium (usually because they have worked together before).
 - **SUSTA-SMART supporting companies:** If any relevant industrial partner supporting SUSTA-SMART is involved as part of the consortium of a project, will be mentioned here.
 - **Standardisation actions:** In the last couple of fields of the considered projects table, a summary of the standardisation actions performed is divided in:
 - **Issues:** Standardisation needs and issues the project consortium has detected and faced during the development of the project.
 - **Actions performed:** Which actions have been taken regarding standardisation (e.g. work package dedicated to standardisation issues, etc.) and who performed these actions.

Summary table is presented as follows. Available information is related to the feedback obtained until the end of the project.

General information			Partners Involvement		
No.	Name	Status	SUSTA-SMART partners involved	Relevant non SUSTA-SMART partners	SUSTA-SMART supporting companies involved
Personal Protective Equipments(PPEs)					
1	SAFE@SEA (FP7-NMP)	Finished (09/12)	CENTEXBEL (WP Leader)	SINTEF (Coordinator and standardisation)	GRADO ZERO SPACE (WP Leader) OHMATEX (WP Leader)
2	PROSPIE (FP7-NMP)	Finished (11/12)	D'APPOLONIA (Partner) ESF (through Henk Van Houtte Consulting) (Standardisation and dissemination WP leader)	TNO (Coordinator)	
3	PROFITEX (FP7-NMP)	Finished (09/12)	D'APPOLONIA (Partner)	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN (Coordinator)	
4	SAFEPROTEX (FP7-NMP)	Running (09/13)	CETEMMSA (WP Leader)	CLOTEFI (Coordinator) TAMPERE UNIVERSITY OF TECHNOLOGY (Standardisation)	
5	PROETEX (FP6-IST)	Finished (01/10)	D'APPOLONIA (Follow up to the Coordinator)	CONSIGLIO NAZIONALE DELLE RICERCHE (Coordinator) EUCENTRE (Standardisation)	PHILLIPS RESEARCH (Partner)
6	IPROTECT	Running	CENTEXBEL	CENTRALNY INSTYTUT	

	(FP7-NMP)	(09/13)	(Contacted by IPROTECT, interested about SUSTA-SMART)	OCHRONY PRACY (Coordinator) TYOETERVEYSLAITOS (Standardisation)	
7	PROSYS-LASER (FP7-NMP)	Finished (11/12)	CENTEXBEL (Has contact with PROSYS-LASER partner STFI) ESF (through Henk Van Houtte Consulting member of the Advisory Board)	LZH LASER ZENTRUM HANNOVER E.V. (Coordinator) SÄCHSISCHES TEXTILFORSCHUNGSINSTITUT E.V. – STFI (Standardisation)	GRADO ZERO SPACE (Partner)
8	IF REACT (FP7-SECURITY)	Running (12/14)	CETEMMSA (Follow up to the Coordinator)	UNIVERSITE PARIS XII - VAL DE MARNE (Coordinator)	
9	STAYCOOL (FP7-SME)	Finished (12/12)	CETEMMSA (Follow up to the Coordinator)	NORTH WEST TEXTILES NETWORK LIMITED (Coordinator)	
10	WASH&LOAD (FP7-SME)	Finished (12/12)	D'APPOLONIA (Coordinator)		
11	SMART@FIRE (FP7-ICT)	Running (02/15)	CENTEXBEL (Coordination support, certification testing, standardisation issues) EURATEX (Partner)	IWT (Coordinator)	Company involvement: after announcement of tender.
12	FIREFIGHTERS (International)		CENTEXBEL (Follow up of the coordinator)	CTTG (Coordinator)	
24	SIMPLESKIN (FP7-ICT)	Running (06/16)	CETEMMSA (Has contact with SEFAR AG which is one of the partners of the project consortium)	DEUTSCHES FORSCHUNGSZENTRUM FUER KUENSTLICHE INTELLIGENZ GMBH (Coordinator)	

25	TEXSHIELD (FP7-SMEs)	Running (11/15)	CETEMMSA (Has contact with TWI which is one of the partners of the project consortium)	NORTH WEST TEXTILES NETWORK LIMITED (Coordinator)	
Construction					
13	POLYTECT (FP6-NMP)	Finished (08/10)	D'APPOLONIA (Coordinator) CENTEXBEL (WP Leader)		EXTREME MATERIALS (Partner) SELCOM (Partner)
14	PLACE-IT (FP7-ICT)	Running (12/13)	IMEC (WP Leader) CENTEXBEL (WP Leader Standardisation)	PHILLIPS RESEARCH (Coordinator) FREUDENBERG FORSCHUNGSDIENSTE KG (WP Leader Demonstration, foil and stretch technology) OHMATEX (Partner interconnection)	PHILLIPS RESEARCH (Coordinator) OHMATEX (Partner interconnection)
15	PASTA (FP7-ICT)	Running (09/14)	IMEC (Coordinator and Standardisation issues)		ETTLIN (Partner)
16	POWERWEAVE (FP7-NMP)	Running (12/15)	CENTEXBEL (WP Leader) CETEMMSA (Partner)	THE WELDING INSTITUTE (Coordinator)	BONAR TECHNICAL FABRICS (Partner) LINDSTRAND (Partner) OHMATEX (WP Leader)
17	CONTEX-T (FP6-NMP)	Finished (08/10)	CENTEXBEL (Coordinator) D'APPOLONIA (Partner)		
Consumer goods					
18	MYWEAR	Running	CETEMMSA	BASE	OHMATEX

	(FP7-NMP)	(11/14)	(Has contact with MYWEAR partner OHMATEX)	(Coordinator) OHMATEX (WP Leader)	(WP Leader)
19	I-TEX (FP7-ICT)	Running (09/14)	CENTXBEL (Has contact with SIOEN respect to standardization)	PHILLIPS ELECTRONICS (Coordinator) SIOEN INDUSTRIES (Partner Standardisation)	PHILLIPS ELECTRONICS (Coordinator) SIOEN INDUSTRIES (Partner)
20	DEPHOTEX (FP7-NMP)	Finished (10/11)	CETEMMSA (Coordinator) CENTXBEL (WP Leader)	GRADO ZERO SPACE (Partner)	GRADO ZERO SPACE (Partner)
21	TIIWS (FP7-CAPACITIES)	Running (06/13)	D'APPOLONIA (Coordinator)		
22	STELLA (FP6-IST)	Finished (01/13)	IMEC (Partner)	FREUDENBERG FORSCHUNGSDIENSTE KG (Coordinator)	PHILLIPS ELECTRONICS (Partner)
23	MICROFLEX (FP7-NMP)	Finished (10/12)	EUROPEAN COMMISSION (SUSTA-SMART PO John Cleuren is also MICROFLEX PO and he offered to establish contact) CENTXBEL (Follow up by Karin Eufinger, SUSTA-SMART Coordinator)	UNIVERSITY SOUTHAMPTON (Coordinator)	ELASTA IND. NV (Partner)

Some other research projects has been followed by SUSTA-SMART coordinator out of the scope of SUSTA-SMART but related to relevant standardisation bodies (WGs) in which CENTEXBEL is involved.

These projects were:

- SINETRA: This is a Eureka program project dedicated to several first responder organizations such as police, firemen, rescuers, etc... These are equipped with sensors to measure information such as localization, health parameters and environmental parameters, integrated on their work uniforms.
- LCA2GO: This is a FP7-ENVIRONMENT project which develops sectorial methods and tools for bio-based plastics, industrial machinery, electronics, renewable energy, sensors and smart textiles.
- EASY-IMP: This is a large initiative which groups 12 partners in the areas of IT and intelligent clothing with the approach of consider clothes as meta-products. The goal of EASY is to develop new methodologies, tools and ready-to-use components for designing and producing intelligent wearable products as Meta-Products.

Relevant contacts identified until date to perform actions related with SUSTA-SMART (e.g. send questionnaire regarding standardisation issues) can be seen as follows:

No.	Project	Name	Organization
Personal Protective Equipments(PPEs)			
1	SAFE@SEA(FP7-NMP)	Hilde Faervik (Coordinator) Karin Eufinger (Partner)	SINTEF CENTEXBEL
2	PROSPIE(FP7-NMP)	Jan Brouwer (Coordinator) Giannicola Loriga (Partner) Henk Vanhoutte (Partner)	TNO D'APPOLONIA HENK VANHOUTTE CONSULTING
3	PROFITEX(FP7-NMP)	Patrycja Bosowski(Coordinator) GiannicolaLoriga (Partner)	RWTH AACHEN UNIV. D'APPOLONIA
4	SAFEPROTEX(FP7-NMP)	Silvia Pavlidou (Coordinator) MinnaVarheenmaa (Partner) Virginia Garcia (Partner)	CLOTEFI TUT CETEMMSA
5	PROETEX(FP6-IST)	Giovanni Magenes (Coordinator) Annalisa Bonfiglio (Coordinator) Giannicola Loriga (Partner)	EUCENTRE UNIVERSITY OF CAGLIARI D'APPOLONIA
6	IPROTECT(FP7-NMP)	Helena Mäkinen (Partner)	TTL
7	PROSYS-LASER (FP7-NMP)	Michael Hustedt (Coordinator) Dirk Wenzel (Partner)	LZH HANNOVER STFI
8	IF REACT(FP7-SECURITY)	Catherine Bertrand (Coordinator)	UNIVERSITE PARIS XII
9	STAYCOOL(FP7-SME)	Steve Kay (Coordinator)	NORTH WEST TEXTILES LTD.
10	WASH&LOAD(FP7-SME)	Giannicola Loriga (Coordinator)	D'APPOLONIA
11	SMART@FIRE (FP7-ICT)	Christophe Veys (Coordinator) Karin Eufinger (Standardisation)	IWT CENTEXBEL
12	FIREFIGHTERS(International)	Aldjia Begriche	CTTG
24	SIMPLESKIN (FP7-ICT)	Peter Chabreck (Partner) Paul Lukowicz (Coordinator) Albrecht Schmidt (Partner)	SEFAR AG DKFI TU STUTTGART
25	TEXSHIELD (FP7-SMEs)	Shiva Sundaram (Partner)	THE WELDING INSTITUTE
Construction			
13	POLYTECT (FP6-NMP)	Donato Zangani(Coordinator)	D'APPOLONIA

14	PLACE-IT (FP7-ICT)	Johan de Baets (Partner) Karin Eufinger (Partner)	IMEC CENTEXBEL
15	PASTA (FP7-ICT)	Johan de Baets (Coordinator)	IMEC
16	POWERWEAVE (FP7-NMP)	Ian Jones (Coordinator) Daniel Blanco (Partner) Bernard Paquet (Partner)	THE WELDING INSTITUTE CETEMMSA CENTEXBEL
17	CONTEX-T (FP6-NMP)	Jan Laperre (Coordinator)	CENTEXBEL
Consumer goods			
18	MYWEAR (FP7-NMP)	Antonio Diterlizzi (Coordinator) Henrik Søgaard (Partner)	BASE OHMATEX
19	I-TEX (FP7-ICT)	Giovanni Cennini (Coordinator)	PHILLIPS RESEARCH SIOEN INDUSTRIES
20	DEPHOTEX (FP7-NMP)	Fanny Breuil (Coordinator)	CETEMMSA
21	TIIWS (FP7-CAPACITIES)	Federico Meneghello (Coordinator)	D'APPOLONIA
22	STELLA (FP6-IST)	Christopher Klatt (Coordinator) Johan de Baets (Partner)	FREUDENBERG IMEC
23	MICROFLEX (FP7-NMP)	John Cleuren (Project Officer) John Tudor (Coordinator)	EUROPEAN COMMISSION UNIVERSITY SOUTHAMPTON

3. Overview of standardisation bodies and actions

In parallel to the identification of the relevant research projects screened, an identification of the most relevant standardisation bodies that might be of interest according to the topics of those projects has been also performed.

Relevant standardisation bodies are considered with regards to SUSTA-SMART domains as well as related to a general point of view that includes common fields such as electronics, textiles, etc.

Some of the SUSTA-SMART partners, and other partners identified during this first overview of the relevant research projects are already participating in different standardisation bodies, committees and working groups, so have been valuable contacts to get connected to the actions and activities performed by these bodies. Moreover, establish contacts with relevant standardisation bodies and follow their activities have been useful once identified the standardisation needs of the considered research projects to perform following actions:

- Classify considered research projects according to the application they develop in general sample applications (e.g. development of PPE with electronic integration) to identify the most relevant bodies involved in the standardisation of these kind of developments.
- Get advice from the expert standardisation bodies in their knowledge field to identify for each project sample application the related certificates to be accomplished.
- Through the identification of the certificates, check in which standards these certificates are based or enclosed.
- Identify any lack of standardisation according to the advice and feedback of the standardisation bodies. It is possible some requirements or functionalities considered for the sample applications in which each project development is classified are not completely specified or fulfilled by existing standards.

Actually, there are a lot of TCs and WGs that might be of interest for the domains of SUSTA-SMART, so the work performed on the identification of relevant standardisation bodies has focused mainly on make a reference list considering those related to common aspects of the applications that the relevant research projects develop, and those with a link to any SUSTA-SMART or relevant projects partner involved on SUSTA-SMART project, contact that will let to follow different bodies activities.

According to this, a total of up to 30 standardisation bodies were considered to be asked for advice during the project and to follow their activities. For each SUSTA-SMART domain, a meaningful amount of bodies was taken into account covering most

relevant aspects to be considered for each domain. List of relevant standardisation bodies to follow has been categorized and classified according to these criteria:

- Domain of interest considered in SUSTA-SMART:
 - Personal protective equipments (PPEs).
 - Construction.
 - Consumer goods.
- Denomination of standardisation body:
 - Considered TCs or WGs are members of different standardisation bodies such as CEN, CENELEC, ISO, etc...

The result of the overview of these relevant standardisation bodies and their activities has been summarized on a table with these fields:

- General information: General information for each of the identified standardisation bodies. Standardisation bodies are classified and categorized by domains sections. General information includes:
 - Number: A number to identify the standardisation body.
 - Body: Standardisation body of which the identified TC, WG... is member.
 - Group: Number of the TC/WG identified to be part of the relevant standardisation bodies to be followed.
 - Name: Name of that TC/WG.
- Activities and scope: Identification of the scope that each standardisation body takes care about and overview of their activities.
- Partners' involvement: Identification of the already existing relationships of some SUSTA-SMART or other projects partners with each identified standardisation body.

Summary table is presented as follows:

General information				Activities & scope		Partners Involvement
No.	Body	Group	Name	Scope	Relevant activities	SUSTA-SMART partners
General domain						
1	ISO	TC38	Textiles	Standardization of fibres, yarns, threads, cords, rope, cloth and other fabricated textile materials; and the methods of test, terminology and definitions relating thereto.	Any concerns related to textile industry raw materials, auxiliaries and chemical products required for processing and testing. Specifications for textile products.	CTB is informed via CEN TC 248
2	CEN	TC 248	Textiles and Textile Products	Standardization of the following aspects of textiles, textile products and textile components of products: 1) test methods; 2) terms and definitions; 3) specifications and classifications; 4) Equipment relevant for the testing and use of textiles.	Any concern related to the considered smart textiles and development for specifications and test methods.	CENTEXBEL Fred Foubert and Karin Eufinger follow TC248
3		TC 248/WG9	Prioritisation of Research Topics	Prioritization of research topics. Search and prioritization of new developments	Interaction between research and standardisation regarding textiles. Screening the output of research projects, liaisons with research projects,	CENTEXBEL Fred Foubert and Karin Eufinger follow WG9

					etc.	
3	CEN	TC 248/WG31	Smart Textiles	Definition of the field of smart textiles and the subsequent development of specifications and test methods.	Currently developing two standards: 1) Regarding textiles containing PCM 2) Regarding textile based conductive tracks.	CENTEXBEL Fred Foubert is the secretary, Karin Eufinger is the convenor.
4	CENELEC	TC 210	Prioritization of research topics	To prepare EMC standards and guidelines with particular emphasis on the application of the EMC Directive and other EC Directives that contain EMC references and to coordinate all EMC activities in CENELEC	Search and prioritization of new developments.	
5	CENELEC	TC 106X	Electromagnetic compatibility	TC 106X deals with various aspects of the exposure of people to electromagnetic fields from 0 Hz to 300 GHz.	Concerns related to electromagnetic fields in human environment.	
6	IEC	Several TCs	Several TCs	The International Electrotechnical Commission (IEC) is the leading global organization that publishes consensus-based International Standards and manages conformity assessment systems for electric and electronic products, systems and services, collectively known as	Activities related to SUSTA-SMART concerns are performed by several TCs, including secondary cells and batteries (TC 21), electrical accessories (TC 23), electromagnetic compatibility (TC 77) and many others.	

				electrotechnology.		
7	ETSI	SmartBAN		TC Smart BAN is a vertical technical committee and shall have primarily responsibilities for development and maintenance of ETSI Standards, Specifications, Reports, Guides and other deliverables to support the development and implementation of Smart Body Area Network technologies.	TC Smart BAN activities scope includes communication media, and associated physical layer, network layer, security, QoS and lawful intercept, and also provision of generic applications and services (e.g. web) for standardisation in the area of Body Network Area technologies.	CENTEXBEL Contacted by SUSTA-SMART coordinator
8	ETSI	eHEALTH		The scope of eHEALTH includes the application of ICT (information and communications technologies) across the whole range of functions that affect the health sector. One of the major problems identified in healthcare services is the lack of ICT standards especially for interoperability related to the eHealth area. ETSI is addressing this issue.	eHealth systems include tools for health authorities and professionals, from national to International, from the doctor to the hospital manager, nurses, data processing specialists, social security administrators and - of course - the patients, as well as personalized health systems for individuals and community.	CENTEXBEL Contacted by SUSTA-SMART coordinator
Personal Protective Equipments (PPEs)						
9	ISO	TC 94	Personal safety -- Protective	Standardization of the	Specifications on designs	Henk Van Houtte is a passive member of

			clothing and equipment	quality and performance of clothing and personal equipment.	on how to safeguard persons against hazards other than those concerned with nuclear radiation. This TC is divided in SCs dealing with different types of PPE, e.g. SC13 is dealing with protective clothing.	the TC 94 SC 13
10	CEN	TC 79	Respiratory Protective Devices	To prepare European Standards for respiratory protective devices for work and rescue purposes, including self rescue.	Focus on devices which protect against oxygen deficiency and/or the risk to inhale harmful particles (e.g. dusts, fumes), gases or vapours, as well as take care of European Standards for underwater breathing apparatus.	As chair of the CEN PPE sector forum, Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.
11	CEN	TC 85	Eye Protective Equipment	The principal objective of CEN/TC 85 is the establishment of specifications and test methods relevant to eye and face protectors.	The purpose of CEN/TC 85 activities is to help manufacturers and notified bodies in the CE certification.	As chair of the CEN PPE sector forum, Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.
12	CEN	TC 158	Head Protection	To revise existing standards where necessary, and to draft new ones if required. Any new standards have to be relevant to the essential	Activities are related to mentioned scope and also additional considerations have arisen in some cases because of direct representations from the European	As chair of the CEN PPE sector forum, Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.

				requirements of the PPE Directive.	Parliament.	
13	CEN	TC 159	Hearing Protectors	To prepare European Standards related to personal hearing protective equipment to be used when sound exposure is expected to be hazardous to the ear.	Preparation of standards.	As chair of the CEN PPE sector forum, Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.
14	CEN	TC 160	Protection against falls from height including working belts	The scope of CEN/TC 160 is to create a comprehensive structure of standards, taking into consideration standards of related TCs. Develop standards for requirements and test methods relevant to personal fall protection equipment with regard to the improvement of the performance and ergonomics of products.	Activities related to the scope of this TC involve the provision of good information for users in relation to safety and health, the establishment of consistent terminology in the area of personal fall protection equipment standards, facilitation of the application of standards by all interested parties, promotion on further activities in international co-operative standardization, revision of existing European standards in line with the state of the art and definition of future activities with regard to standardization for special applications.	As chair of the CEN PPE sector forum, Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.
15	CEN	TC 161	Foot and Leg protectors	Elaboration of standards	The purpose of this scope	As chair of the CEN PPE sector forum,

				for safety, protective, occupational and other specific job related footwear and lower leg protection.	is to develop specifications for applications such as forestry footwear, fire-fighters footwear, etc.	Henk Van Houtte follows the activities of the TC without active participation in the technical discussions.
16	CEN	TC 122/WG5	Ergonomics of human-system interaction	Standardization in the field of ergonomics. Standardization in the field of ergonomics aims at optimising system performance, effectiveness, efficiency, reliability and availability, safeguarding the safety, health and well-being of those involved or affected. Ergonomics standards provide information about human characteristics and performance, and methods for specifying, designing and evaluating products, systems, services and environments.	Ergonomics (or human factors), as defined by the International Ergonomics Association (IEA), is the scientific discipline concerned with the understanding of the interactions among human and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. Activities excluded from this scope involve standardization of purely technical matters, which are not related to human characteristics and abilities.	
17	CEN	TC 162/WG2-6	Protective clothing including hand and arm protection and lifejackets.	Resistance to heat and fire of protective clothing. Protective clothing against chemicals, infective agents and radioactive	Activities related to the topics of the scope include to develop standards for test methods and requirements relevant to	ESF has liaison status with TC 162. Henk Van Houtte also expert in WG2. CENTEXBEL is member of WG2

				contamination. Resistance to mechanical impact of protective clothing. Lifejackets.	PPE with regard to the improvements of the performance of products, to create a comprehensive structure of standards, taking into consideration standards of other TCs, to provide better information for users in relation to safety and health, to facilitate the application of standards by all interested parties, to promote further activities in international co-operative standardization and to revise the existing European Standards if the state of the art progresses.	
18	ISO	TC 94	Fire safety	Standardization of the methods of assessing fire hazards and fire risk to life and to property.	Activities are focused to the contribution of design, materials, building materials, products and components to fire safety and methods of mitigating the fire hazards and fire risks by determining the performance and behaviour of these materials, products and components, as well as of buildings and structures. It is excluded materials	Henk Van Houtte follows the activities of this SC.

					and equipments already covered by other technical committees, as well as fields covered by other ISO and IEC committees.	
19	CEN	TC205/WG14	Surgical clothing and drapes, and medical face masks	Standardization in the field of non-active medical devices.	Activities performed by this TC focus on the objective of identify, adopt or adapt ISO or other standards, or if no ISO or other standard exists, to prepare CEN standards relevant to the Medical Device Directive for non-active medical devices. Excluded are non-active medical devices currently within the scopes of other CEN/TCs, but included are (with appropriate liaison with CENELEC) some types of non-active medical devices that use electrical power (from battery or mains supply) for functioning.	CENTEXBEL is member of this WG.
20	CEN	PPE FORUM	PPE Sector Forum	Horizontal TC and WG meeting for PPE.	Horizontal TC and WG meeting for PPE.	ESF Henk Van Houtte is chair in PPE FORUM Additional partners following up are CENTEXBEL and FESI.
21	CEN-CENELEC	BTWG8	Protective textiles and personal protective clothing and equipment	Established to fulfil programming mandate M/509 ENON PROTECTIVE	Task groups: TG 1: Compatibility of different elements –	ESF Henk Van Houtte is convenor and chair of TG4. Centexbel Karin Eufinger is secretary and

				<p>TEXTILES AND PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT</p> <p>Started in Nov. 2012 and needs to finish its final report in Nov. 2013 (will then be disbanded).</p> <p>Goal is to identify standardisation needs in the 4 domains covered by the task groups and propose solutions on how to address these needs.</p>	<p>Technology</p> <p>TG 2: Compatibility of different elements - Integration of the complete system</p> <p>TG 3: Comfort and ergonomics</p> <p>TG 4: Environmental sustainability and total cost of ownership</p> <p>TG1 programme has a close link to SUSTA-SMART efforts on PPE</p>	<p>chair of TG1.</p> <p>FESI Alberto Bichi is member.</p>
Construction						
22	CEN	TC 189	Geosynthetics	<p>Characteristics required for use in the construction of roads and other trafficked areas (excluding railways and asphalt inclusion).</p>	<p>Standards development on the mentioned construction scenarios.</p>	<p>CENTEXBEL</p> <p>Fred Foubert is the secretary.</p>
23	ISO	TC 221	Geosynthetics	<p>Scope related to TC 189.</p>	<p>Scope related to TC 189.</p>	<p>CENTEXBEL</p> <p>Via CEN TC 189 has relationship.</p>
24	CEN	TC 288	Execution of special geotechnical works for construction	<p>Execution of special geotechnical works for construction.</p>	<p>CEN/TC 288 will achieve the 6 draft standards under development and will revise the published standards if the experience on their application in the European countries or the technical progress will make the revision necessary.</p>	

25	CEN	TC 250	Structural Eurocodes	<p>The Structural Eurocodes programme was initiated by the European Commission with the objective of establishing a set of common technical rules for the design of building and civil engineering works to ultimately replace the differing rules in force in the various Member States. This objective remains. Structural Eurocodes prepared by CEN/TC 250 should enable Design Engineers to utilize harmonized design rules for structures built within CEN Member States and hence assist in eliminating barriers to trade.</p>	See EN Eurocodes below.	
26		EN Eurocodes	EN Eurocodes	<p>The EN Eurocodes are a series of 10 European Standards, EN 1990 - EN 1999, providing a common approach for the design of buildings and other civil engineering works and construction products. They are the recommended means of</p>	<p>The EN Eurocodes apply to structural design of buildings and other civil engineering works including geotechnical aspects, structural fire design, situations including earthquakes, execution and temporary structures.</p>	

				giving a presumption of conformity with the essential requirements of the Construction Products Directive for construction works and products that bear the CE Marking, as well as the preferred reference for technical specifications in public contracts.	The EN Eurocodes coverbasis of structural design (EN 1990) , actions on structures (EN 1991) (Eurocode 1), the design of concrete (EN 1992) (Eurocode 2), steel (EN 1993) (Eurocode 3), composite steel and concrete (EN1994) (Eurocode 4), timber (EN 1995) (Eurocode 5), masonry (EN 1996) (Eurocode 6) and aluminum (EN 1999) structures, together with geotechnical design (EN 1997) (Eurocode 7) and the design, assessment and retrofitting of structures for earthquake resistance (EN 1998) (Eurocode 8).	
Consumer goods						
27	ISO	TC 243	Consumer product safety	Standardization in the field of Consumer product safety.	Development of standards focusing to the safety on consumer goods.	
28	CEN	TC 312/WG1	Thermal solar systems and components and solar collectors	Solar collectors for energy harvesting.	The CEN/TC312 has already elaborated a set of products in the solar thermal energy field including solar collectors, factory made systems,	FESI Alberto Bichi

					<p>solar energy vocabulary and custom built systems, and is currently working on revised set for custom built systems and solarcombistores. All standards are subject to revision.</p>	
29	CEN	TC 136	Sports, playground and other recreational facilities and equipment	<p>Standardization at the international level concerning sports, playground and other recreational facilities and equipment is carried out by ISO/TC 83 "Sports and recreational equipment", ISO/TC 94 "Personal safety - Protective clothing and equipment", ISO/TC 177 "Caravans" and ISO/TC 188 "Small craft".</p>	<p>CEN/TC 136 is in constant touch with the international committees concerned in order to obtain relevant information and to avoid overlapping in standardization work.</p>	FESI
30	CEN	TC 305	Footwear	<p>Elaboration of International Standards on test methods for components for footwear and for whole shoe, irrespective of the material, in order to harmonize the determination of the different properties needed in relation with the suitability for the end</p>	<p>Elaboration of Technical Reports on performance requirements for components for footwear, irrespective of the material.</p>	

				use and fitness for purpose of shoes.		
31	CLC	TC 82	Solar photovoltaic energy systems	To prepare European Standards for systems of and components for photovoltaic conversion of solar energy into electrical energy and for all elements in the entire photovoltaic energy system. The aim will be to support the accelerated market introduction by harmonization of standards.	The standards will deal with EMC, Machine, CPD and LVD directives. The CLC/TC 82 will especially develop standards in areas where there are special European concerns. The CLC/TC 82 will cooperate closely with IEC TC 82 and the National Committees.	CENTEXBEL Member of this TC
32	CEN	TC 134	Resilient, textile and laminate floor coverings	Standards creation on different properties of these topics.	Standards creation on different properties of these topics.	

More information can be found also on the following websites:

CEN Technical Committees, Workshops and other bodies

<http://www.cen.eu/cen/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/Pages/default.aspx>

CENELEC List of Technical Bodies

<http://www.cenelec.eu/dyn/www/f?p=104:6:1713317423787865>

ETSI Portal

<http://portal.etsi.org/portal/server.pt/community/home/312>

ISO Technical committees

http://www.iso.org/iso/home/standards_development/list_of_iso_technical_committees.htm

IEC List of IEC Technical Committees and Subcommittees

<http://www.iec.ch/dyn/www/f?p=103:6:0##ref=menu>

ITU

<http://www.itu.int/en/ITU-T/groups/Pages/default.aspx>

No.	Body	Name	Contact person
General domain			
1	ISO TC 38	Textiles	HisashiTazawa (Secretary) Zhao Qingzhang (Chair)
2	CEN TC 248/WG31	Textiles and Textile Products	Tim Bellamy (Secretary)
3	CEN TC 248/WG9	Smart Textiles	Fred Foubert (Secretary)
4	CENELEC TC 210	Prioritization of research topics	Luis Almeida (Secretary)
5	CENELEC TC106X	Electromagnetic compatibility	Jens Erdmann (Program manager)
6	IEC TCs	Several TCs	Johan de Baets (Contact)
7	ETSI	SmartBAN	
8	ETSI	eHEALTH	
Personal protective equipment (PPEs)			
9	ISO TC 94	Personal safety -- Protective clothing and equipment	Olga Pitt (Secretary) Dr. Takashi Ibusuki (Chair)
10	CEN TC 79	Respiratory Protective Devices	Hans Peter Keller (Secretary) Thomas Krueger (Chair)
11	CEN TC 85	Eye Protective Equipment	Rim Chaouy (Secretary) HerveMeillat (Chair)
12	CEN TC 158	Head Protection	Magda Dicarlo (Secretary) Jacques Forrest (Chair)
13	CEN TC 159	Hearing Protectors	Martin Liedtke (Chair)
14	CEN TC 160	Protection against falls from height including working belts	Petra Jackisch (Chair)
15	CEN TC 161	Foot and Leg protectors	Tim Bellamy (Secretary) A.Simmons (Chair)
16	CEN TC 122/WG5	Ergonomics of human-system interaction	S.Lentz (Secretary) G.Krämer (Chair)
17	CEN TC 162	Protective clothing including hand and arm protection and lifejackets.	Peter Heffels (Chair)
18	ISO TC 94	Fire safety	Magda Dicarlo (Secretary) BjörnSundström (Chair)

19	CEN TC 205/WG14	Surgical clothing and drapes, and medical face masks	B.Bösler (Secretary) M.DeCré (Chair)
20	PPE FORUM	PPE Sector Forum	Damir Zorcec(Secretary) Henk Van Houtte (Chair)
21	CEN-CENELEC BTWG8	Protective textiles and personal protective clothing and equipment	Henk Van Houtte (Chair) Karin Eufinger (Secretary)
Construction			
22	CEN TC 189	Geosynthetics	Fred Foubert (Secretary)
23	ISO TC 221	Geosynthetics	Sharon Cumberbatch(Secretary)
24	CEN TC 288	Execution of special geotechnical works for construction	C.Pineau (Secretary) C.Gilbert (Chair)
25	CEN TC 250	Structural Eurocodes	M.K.Greenley (Secretary) J-A.Calgaro (Chair)
26	EN Eurocodes	EN Eurocodes	EN Eurocodes Website
Consumer goods			
27	ISO TC 243	Consumer product safety	Brian Haydon (Secretary) Elizabeth Nielsen (Chair)
28	CEN TC 312/WG1	Thermal solar systems and components and solar collectors	V.Drosou (Secretary) C.Travasaros (Chair)
29	CEN TC 136	Sports, playground and other recreational facilities and equipment	J. Jung (Secretary) R-W. Popp
30	CEN TC 305	Footwear	I.Aguado (Secretary) P.Piñeiro (Chair)
31	CLC TC 82	Solar photovoltaic energy systems	Alex Faille (Program manager)
32	CEN TC 134	Resilient, textile and laminate floor coverings	Fred Foubert (Secretary) S.Van De Vrande (Chair)