



ASTM INTERNATIONAL  
Helping our world work better

# Promoting innovation and convergence through global standards

Sara Gobbi  
Director European Affairs

Convegno Accredia “New Normal – In cerca di idee”  
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# Topics

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# What is ASTM?

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## A Proven and Practical System

- Established in 1898
- 148 Committees & 12,800+ Standards
- 8,400+ ASTM standards used in 75 countries
- 30,000 +members
  - 8,000+ International Members from 150+ countries
- Accreditation:
  - American National Standards Institute (ANSI)
  - Standard Council of Canada (SCC)
- Process complies with principles of WTO/TBT Agreement (openness, transparency, consensus, effectiveness, coherence, developing countries consideration)

# ASTM International Mission



Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate **consensus standards** – developed with our international membership of volunteer technical experts – and **innovative services** to improve lives... Helping our world work better.



# Proficiency Testing Services



## Testing and Certification

- Proficiency Testing Services: confirm and improve competence; determine method accuracy; instill the ability to judge, assess and compare test methods
- Resulting data creates statistical summary reports
- Certification and Declaration Programs provide independent evaluation of compliance to standards or regulations
- Available worldwide, they provide a level playing field, answer regulatory needs and reinforce consumer confidence
- ASTM also offers Personnel Certification Programs



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proficiency testing programs involve 4,700 Laboratories and 6,500 units of participation  
58% of participation from outside USA

# ISO 17043 Accreditation



- Successfully completed A2LA Accreditation process
- Meets ISO/IEC 17043:2010, “Conformity Assessment-General Requirements for Proficiency Testing”
- 45 programs are A2LA accredited
- Full list and scope at [www.astm.org/ptp](http://www.astm.org/ptp)

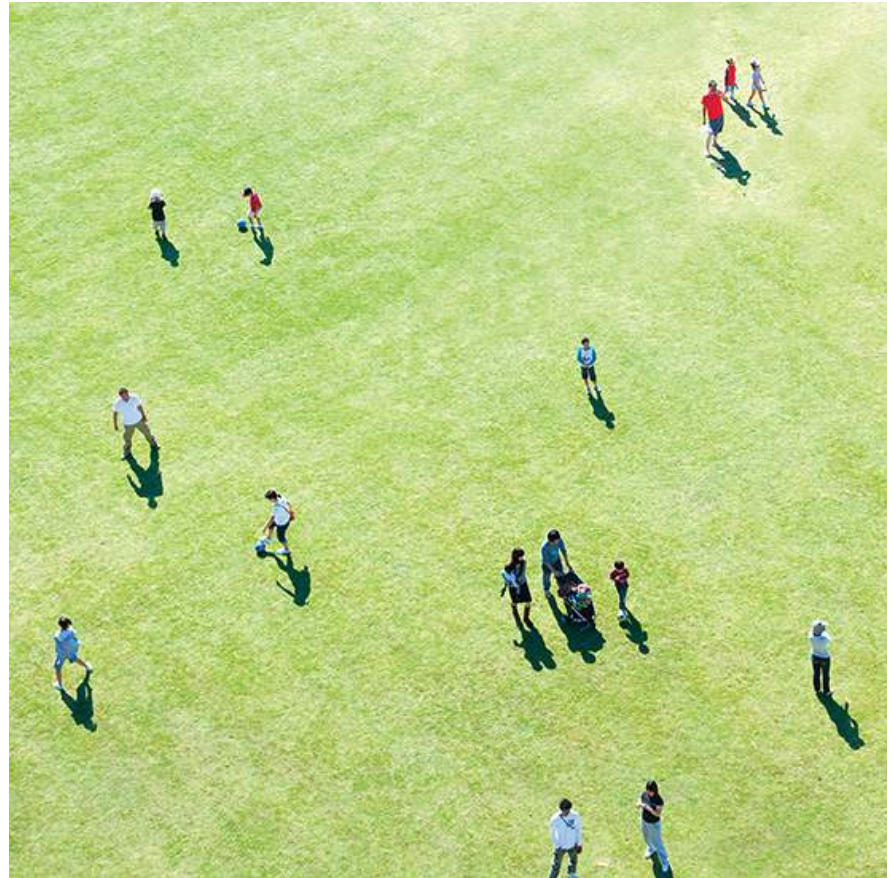




# ASTM Standards Cover



- Aerospace and Shipbuilding
- Agriculture
- Asset Management
- Automotive
- Building and Construction
- Chemicals
- Consumer Products
- Energy and Utilities
- Environment
- Food Processing
- Health Care and Medical Devices
- Information Technology
- Manufacturing
- Metals
- Mining and Mineral Processing
- Oil and Gas
- Plastics
- Quality
- Safety and Security
- Services
- Sports and Leisure
- Textiles and Leather
- Transportation and Logistics







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# ASTM in Europe

# ASTM in Europe

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## European participation

Over **1,900 technical experts** from European Member States work collaboratively with their peers from around the world to develop global standards and solutions that improve performance and operability in manufacturing, materials, products, processes and more.

Opened an **ASTM Office of European Affairs** in 2013 in Brussels, Belgium, to interface with European institutions, ESO's, National Standard Organizations and other SDOs, trade federations, consumer groups, companies and research institutes.

**400+ references to ASTM standards in EU legislation**  
ASTM Compass used by universities in Italy, Sweden, UK, Denmark, Germany, Poland, Spain

# ASTM standards in support of EU laws



## Design and Safety of Aviation

European Aviation Safety Agency now accepts ASTM standards for General Aviation and Light Sport Aircraft as Certification Specifications and Acceptable Means of Compliance in support of new agency regulations and decisions.



## Fuel Quality and Emissions

Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels.



## Ecolabels for Lubricants

Commission Decision (EU) 2018/1702 of 8 November 2018 establishing the EU Ecolabel criteria for lubricants

# ASTM in Italy



- Over 140 members from a variety of industries and stakeholders;
- Good engagement of student members from Italian Universities including Politecnico di Milano, Università degli Studi di Genova, Bologna, Trento, Trieste, Università del Salento, La Sapienza, Politecnico di Torino etc;
- Over 10 organizational memberships including LimaCorporate; FlyingBasket; Auxel Srl etc.
- Participation across a variety of sectors and technical committees (F42; F44; F38; D02; D37; A01;F24);
- Italian Construction Technologies Institute (ITC) uses ASTM standards as references for various construction products, such as composite materials, thermal insulation, glass, and ceramics.
- Commercial agreement with UNI for the distribution of ASTM standards;




# Italian young professional in Emerging Professional Program



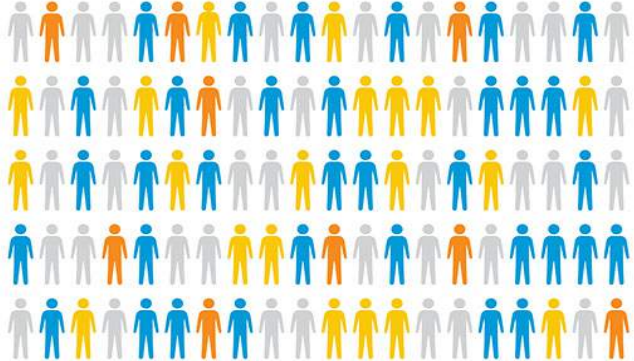
*"I have submitted my first standard and the first ballot went very well! 100% of acceptance! Thank you for your support and training!" -*

Carla Divieto, National Institute of Metrological Research, Italy

- Launched in 2015, the program equips young professionals who represent companies and industries that rely on technical standards. These participants learn the ASTM International process – known for its commitment to openness and transparency – as well as general leadership skills. Already, dozens of graduates have taken leadership roles to help create or update standards across 60 ASTM International committees and their subcommittees



## The Emerging Professionals Program: Celebrating **100** Participants



<b>60 Technical Committees Represented</b>	<b>34 New technical contacts</b>
	<b>20 New subcommittee/committee officers</b>
	<b>9 From outside the United States</b>

### Upcoming Nomination Deadlines

Aug. 6 (Oct. 22 Workshop) | Aug. 13 (Nov. 5 Workshop)

[www.astm.org/emergingprofessionals](http://www.astm.org/emergingprofessionals)

# ASTM in support of Italian legislation



## Over 100 references to ASTM in *Gazzetta Ufficiale*

- DECRETO 15 luglio 2016, n. 172 Regolamento recante la disciplina delle modalita' e delle norme tecniche per le operazioni di dragaggio nei siti di interesse nazionale

Le procedure per i corretti prelievo, preparazione, conservazione ed analisi dei campioni per le diverse matrici ambientali, inclusi i parametri relativi al controllo della qualita' del dato, devono essere concordate con gli enti di controllo prima dell'avvio delle attivita' di campionamento, nell'ambito di procedure riconosciute a livello nazionale e/o internazionali (UNICHIM, ISO, [ASTM](#), IRSA/CNR, EPA, etc.).

- DECRETO 17 febbraio 2020, n. 20 Regolamento recante disposizioni per l'acquisto, la detenzione, il trasporto, il porto degli strumenti marcatori da impiegare nell'attivita' amatoriale ed in quella agonistica.

b) Per la protezione del viso devono essere utilizzate maschere di materiale resistente idonee a coprire interamente il volto, munite di lenti realizzate secondo gli standard [ASTM](#).



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# Promoting Global Convergence

# ASTM Supports Global Convergence

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- ASTM has entered into technical cooperation agreements with other international standards bodies like ISO and IEC.
- ASTM maintains Memorandums of Understanding to support technical cooperation with over 100 regional and national standards bodies – including CEN, Singapore Enterprise, Standards Institute of Israel, and others in the Middle East, Latin America, APEC/ASEAN, and Eurasia.
- Signatory of the UNECE Declaration on Gender Responsive Standards in 2019
- Supporting UNECE initiative on Standards for the SDGs
- Member of the OECD Partnership of International Organizations (with ISO, WIPO, WTO etc)
- We advocate globally for policies where regulators have the flexibility to choose standards based on important attributes such as technical quality, relevance, and suitability to task.



# ASTM and OECD the IOs Partnership



- Since 2014, 50+ secretariats of IOs have worked together to strengthen the quality, effectiveness and impact of international rules through a voluntary partnership managed by the OECD
- 10 April 2019: Launch of a brochure on The contribution of international organizations to a rule-based international system,
- ASTM's Participation since creation;
- Contribution to the working groups on stakeholder engagement and coordination among IOs;
- We offered examples and success stories from our experience that were of inspiration to other IOs





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## Technical Cooperation Agreement with CEN

- Pilot MoU signed on September 26<sup>th</sup> 2019.
- Aiming at facilitating dialogue and convergence on the technical requirements and related attributes of standards development
- Two years Pilot covering biobased plastic and end of life tires.



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# COVID-19 Response

# COVID-19 Response

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- Key ASTM **PPE standards available** for the public to both view and download at no-cost.
- From April until June, about 100,000 visits to our Covid site, and 33,000 click-thru's to our PPE standards by individuals in 117 countries.
- More ASTM **standards development activities** around the cleaning and re-use of PPE, as well as emerging testing issues.
- The Additive Manufacturing Center of Excellence published a **COVID-19 Response Guide**, providing guidance on additive manufacturing for product designers and manufacturers
- In March the European Commission announced it would **allow products into the European market** that meet certain international standards and requirements recommended by the World Health Organization (WHO), including ASTM International standards for medical gloves and masks.
- In person meetings from mid-March through August have been cancelled. However, **85% of committees have used virtual meetings**



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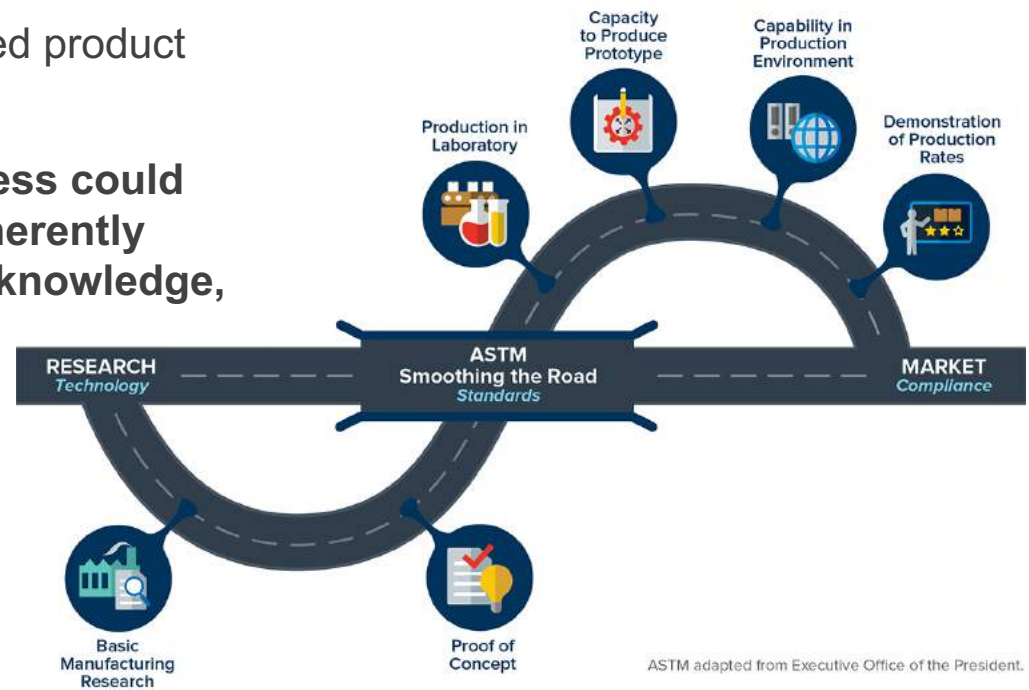
# Innovation Strategy: Centers of Excellence

# Manufacturing Innovation Initiatives



## Key Opportunities to Align Efforts

- Goal of new initiatives/institutes is often to support emerging technologies where standards do not yet exist
- Immediate need for standards to speed product testing, qualification, certification, etc.
- **Idea: Standards development process could serve as a conduit because it is inherently collaborative: fosters exchange of knowledge, expertise, perspectives, etc.**



# ASTM AM Center of Excellence



**Bridges standards development with R&D and Innovation Community** to better enable efficient development of standards, education and training, certification, and proficiency testing programs to **support commercialization and adoption.**



# CoE founding partners



EWI and Auburn  
University/NASA



Manufacturing  
Technology Centre (MTC)



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# ASTM International Exo Technology Center of Excellence (ET CoE)



- Established in 2019
- A collaboration between ASTM (and its more than 30,000 members) and consumers, industry, government, healthcare, and academia
- Focus is to accelerate safety, quality, and reliability standards for exoskeletons and their systems.
- Founding partners include New Stone Soup, Exoskeleton Report, and Optimum Performance Services



# Exoskeleton Examples

## Exoskeleton Report Catalog



### Upper Body

Airframe – Levitate Tech  
EksoWorks – Ekso Bionics  
Paexo Shoulder – Ottobock  
shoulderX – SuitX  
Hilti Exo 01 – Hilti  
Ironhand -- Bioservo



### Back & Hip

backX – SuitX  
Flex Lift – Kinetic Edge  
HAL Lumber Support – Cyberdyne  
Laevo V2 – Laevo



### Lower Body

Elevate – Roam Robotics  
Ekso NR – Ekso Bionics  
Indego – Indego  
ReWalk – ReWalk  
UpRise – Mawashi  
Dephy Exo Boot – Dephy  
Onyx – Lockheed Martin  
Keego – B-Temia



### Full Body

Guardian XO – Sarcos  
MAX – SuitX  
Exogen – Kinetic Sport Science

*Any mention of commercial products is for information only; it does not imply recommendation, endorsement, or certification by ASTM International.*

# US-EU Benefits

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- This new paradigm in research and standardization collaboration benefits stakeholders on both sides of Atlantic
- Fostering better communication and knowledge transfer amongst the US and EU research and academia communities, industry and government
- Advancing state of the art industry techniques and practices in an emerging area
- Driving the development of standardization
- Providing a pathway for standards to be adopted and implemented nationally, regionally and internationally
- Securing US-EU leadership in a strategic enabling technology
- Worth considering as a model for other new areas of standardization



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Thank you!  
[sgobbi@astm.org](mailto:sgobbi@astm.org)

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