



Snapshots of IO Practices

Partner Standards Developing Organisation (PSDO) Agreement with ISO

Organisation(s): ASTM International

The Snapshots of IO Practices present examples of specific efforts undertaken by an international organisation to work towards more effective international instruments. They aim to highlight examples of practices within the five focus areas of the Partnership of International Organisations for Effective International Rulemaking (IO Partnership), namely the variety and development of international instruments, their implementation, evaluation, ensuring stakeholder engagement, and co-ordination among IOs. The snapshots are submitted by the secretariats of the relevant international organisations implementing the relevant practice. The practices were compiled by the OECD Secretariat and focal points of the IO Partnership (UNCITRAL, OIE, WHO, ISO, WCO, BIPM, and SIECA), with a brief review to ensure consistency and comparability of the information provided within the snapshots. The inclusion of a practice in these snapshots implies no endorsement or assessment of that practice on the part of the OECD Secretariat or the focal points of the IO Partnership.

1	Overview of the Practice	Answers	Comments and intersections
1.1	Organisation	ASTM International	
1.2	Area of relevance among the IO partnership focus themes (variety of instruments, implementation, stakeholder engagement, evaluation, co-ordination)	Co-ordination	
1.3	Name of the Practice	A Partner Standards Developing Organization (PSDO) agreement between ASTM International and the International Organization for Standardization (ISO) on Additive Manufacturing (AM)	
1.4	Name of person(s) completing the template		

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2	Description of the Practice	Answers	Comments and intersections
2.1	Please describe the practice shortly, providing information on its core features.	A Partner Standards Developing Organization (PSDO) agreement between ASTM International and the International Organization for Standardization (ISO) on Additive Manufacturing (AM), signed in 2011, paved the way to create joint standards in additive manufacturing. The agreement covers the development of joint standards, fast-tracking the adoption process of an ASTM International standard as an ISO final draft standard; the formal adoption of a published ISO standard by ASTM International; and the maintenance of published standards.	
2.2	What are the objectives of the practice?	The main objective was to create one set of global standards in the field of additive manufacturing, also known as 3D printing, and avoid duplicative efforts.	
2.3	What have been the key results of the practice?	Publication of 11 joint ISO/ASTM standards so far with another 30+ in various stages of development.	
2.4	In what year was the practice introduced?	2011	
2.5	Has the practice been updated/reformed since then? If yes, when and how has it evolved over time?	Today the PSDO is in the same form as it was initially. There are no proposed changes to it. It was renewed in September 2020 for another three years with no changes.	
2.6	What do you consider to be the primary strengths of the practice?	<p>Creation of one set of AM standards – to be used all over the world</p> <p>Common roadmap and organisational structure for AM standards</p> <p>Leverage of procedural and constitutional strengths of ASTM International and ISO</p>	

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2.7	What do you consider to be the main challenges faced during the implementation of the practice?	<p>1. The alignment of the processes for standard development. The review process for joint standards may also represent additional challenges for co-ordination.</p> <p>2. Relative size of stakeholder expertise. Limited pool of experts in the field of additive manufacturing.</p>	
2.8	<p>Does the practice have a formal/normative basis within the organisation or is it conducted informally? Does this basis make the practice mandatory or voluntary?</p> <p>If there is formal basis, please provide the relevant link or documentation.</p>	The practice is based on a formal agreement between ASTM International and ISO.	
2.9	At what frequency is the practice applied? i.e. is it conducted once or on an iterative basis?	The PSDO is applied regularly as it follows the progress of standard development	
2.10	Is this practice applied systematically, (e.g. with respect to every normative instrument, according to specific criteria or on an ad hoc basis)?	It's applied for standards on additive manufacturing and technical aspects that are mutually identified and agreed upon by the two organizations	
2.11	Please provide specific details or examples to illustrate the practice (including supporting links and documents).	<p>See: https://www.astm.org/COMMIT/AM_Standards_Development_Plan_v2.docx</p>	

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3	Design of the Practice	Answers	Comments and intersections
3.1	Who designed the practice (e.g. Was it developed internally, in collaboration with other organisations, etc?)	The practice was designed by the internal staff of the two organisations. ANSI, the American National Standard Institute was consulted.	Intersection between the development of international instruments (WG1), stakeholder engagement (WG3), and co-ordination (WG5).
3.2	Which stakeholders were engaged with in the design of the practice?	The agreement was developed following interest of stakeholder from the AM community interacting with both organisations. While the design of the agreement was operational to ISO and ASTM staff, stakeholders from the AM communities were considered in the that led to the design.	
3.3	How long did it take to design the practice?	3 to 6 months	
3.4	What resources were needed to design the practice initially (i.e., staff, budget etc.)?	Ordinary staff, no extra budget	
3.5	What challenges were encountered during the design of the practice and how were they overcome?	This was the first time that ASTM and ISO agreed upon developing joint documents through a collaborative ad hoc process. Mutual desire to be responsive to the stakeholder community helped overcome the difficulties.	

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3.6	Has the practice been tested before implementation (i.e. pilot phase)? If yes, please describe.	<p>The following areas were chosen by ISO/TC 261 and ASTM F42 to pursue as pilot AM standards for joint development:</p> <ol style="list-style-type: none"> 1. Harmonisation of existing ISO 17296-1 and ASTM 52912 terminology standards in additive manufacturing (convened by ISO) 2. Standard test artifacts (convened by ASTM) 3. Requirements for purchased AM parts (convened by ISO) 4. Design guidelines (convened by ASTM) 	
4	Implementation of the Practice		Comments and intersections
4.1	Which units are responsible for implementing the practice within your IO?	Technical Committee Operation (TCO) with the support of other departments	
4.2	Are IO members involved in implementing the practice? If so, how?	Yes, the actual standard development is carried out by the members of both organisations.	
4.3	Are external actors beyond the organisation or its membership involved in implementing the practice? If so, how?	No	
4.4	Which resources are needed to implement the practice (e.g., staff and budget)?	No extraordinary budget. Only the additional resources to be able to meet more frequently and to continue to market the PSDO.	

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5	Outputs and Evaluation of the Practice	Answers	Comments and intersections
5.1	Has the practice been evaluated or reviewed?	<p>Constantly evaluated and reviewed to make sure it's actually enabling the development of joint standards as intended – enhancements are primarily process oriented to streamline and better align the two standards development models, to ensure the timely and efficient production of mutually beneficial product (full-consensus standards).</p> <p>Also, the actual scope of the practice has expanded over time. Areas of expansion (most recently) include environment, health, and safety (as seen in the new ASTM F42.06 Subcommittee), application-specific standardisation (as seen in the new F42.07 Subcommittee), and AM data.</p>	
5.2	If yes, who carried out the evaluation (please specify whether it was done internally or externally)	<p>A Joint Steering Group (JSG) was established to monitor the progress of the joint groups, report on the status of the joint groups, resolve any problems, present proposals for joint activities to the respective plenary groups, and maintain a three-year plan for joint standards development.</p> <p>A Task force in ASTM staff for internal evaluation of the issues discussed by the JSG.</p>	
5.3	If yes, please describe the evaluation methodology? (e.g. were any quantitative or qualitative indicators/criteria used to measure/assess the outcomes of the practice?).`	<p>The JSG meets twice a year (virtually or in person) and uses ad hoc methodologies to evaluate the progress of the agreement.</p>	
5.4	If yes, what were the conclusions of the evaluation, and has the practice evolved subsequently? If possible, please attach related documents or provide a link.	<p>Regular evaluations are making the practice constantly evolve to better align the two standardization processes (see 5.1).</p>	

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6	Additional comments and information	Answers	Comments and intersections
6.1	Is there any more information or documentation that would be valuable to share in relation to the practice (e.g. links, reports, meeting minutes, supporting documents)?	AM standard development plan: https://www.astm.org/COMMIT/AM_Standards_Development_Plan_v2.docx	
Sources			