Why Standards?

Fosters global recognition
Provides global interoperability
Provides sustained development and retention of investment
Cost savings by optimizing operations
Improve customer satisfaction
Provides access to new markets
Increases productivity and competitive advantage
Reduces negative impacts on the environment
Types of Standards

Technology
- Symbology, RFID, I.C. Card, Sensor

Data Content
- Semantics (DIs or AIs), Syntax, Unique Item Identification, Unique Device Identification

Conformance
- Print Quality, Test Specifications, Conformance to Air Interface

Network
- Object-to-object communications, Sensor Networks

Application Standards
- Freight container, Returnable Transport Item, Shipping Label, Product Package, Product Mark/Tag, eSeal, Access to web services
International Standards Activities

There will be a short quiz at the end.

International
- International Organization for Standardization (ISO)
- International Electrotechnical Commission (IEC)
- Universal Postal Union (UPU) (United Nations)

Regional
- CEN
- ODETTE

National
- Standards Assoc of China (SAC)
- British Standards Institution (BSI)
- KATS
- ECMA
- CENELEC
- ANSI
- Déutches Institut für Normung (DIN)
- ETSI
- JISC

Industry
- DoD
- ATA
- ATIS
- AIA
- HIBCC
- AIG
- GS 1
- Other
- VDA
- T6 B10

Other
- AIM
- IEEE
- INCITS
- MHI
- GS 1
- Other
- EPCglobal
- ODETT
ISO Deliverables Process

1. NP (New Work Item Proposal) by Member Body or Liaison
   - 3 months TC (ISO) or SC (JTC 1)

2. Building expert consensus
   - 3 months TC (ISO) or SC (JTC 1)

3. Consensus building within TC/SC
   - 4 months JTC 1-5 months ISO TC (ISO) or SC (JTC 1)

4. Enquiry on DIS (Draft International Standard)
   - 2 months ISO Member Bodies

5. Formal vote on FDIS (proof check by secretariat)
   - < 1 month Project editor/ISO Tech Editor

6. Publication of International Standard
   - < 2 months ISO Central Secretariat

Deliverables
- First CD (Committee Draft)
- DIS (Draft International Standard)
- Final text for processing as FDIS (Final Draft International Standard)
- Final text of IS (International Standard)
- ISO International Standard

Note: At the conclusion of each stage the result of voting concludes whether the work item is advanced to the next stage or sent back to repeat the stage.

Comments received on a ballot must be reconciled before advancement. FDIS balloting is Yes/No. Any comments received are retained for the next periodic review (≈5 years).
This target date planner shows you the three main development tracks for project managing the development of an ISO standard. It will help you choose the track and then set the target dates you need to meet for your standards to be delivered to the market on time. The times shown are the maximum for each stage and can be shortened whenever possible.

**ISO Technical Committee time:**
Document being developed in the relevant committee

**ISO Central Secretariat time:**
Document being processed (e.g. evaluation in the relevant committee, editing, proofreading)

**ISO Member body time:**
Document circulated to ISO member bodies for DIS or FDIS vote

Months marked with this are the key limit dates. Missing them means action is needed to avoid eventual cancellation of the project.

Approval at DIS and FDIS stages requires two thirds of P members of the TC to vote yes and not more than a quarter of all votes cast to be negative.

100% approval at DIS can mean straight to publication if the committee agrees.
MH10 (SC: Unit-Loads and Transport-Packages) AND ISO/TC 122 Packaging
What is MH10?

MHI is involved in the standards development process using the second category of accreditation by serving as secretariat of the accredited standards committee ASC MH10 Unit-Loads and Transport-Packages. This committee is concerned with standards development in the areas of unit-loads and transport-packages. Committee activities include work on sizes, heights, testing, terminology, sacks and bags, and coding and labeling.

The scope of the committee effort is as follows:

To facilitate freight movement within transportation and distribution systems by providing standards for transport-packages and unit-loads, including their dimensions, definitions, terminology, coding, labeling, and performance criteria; and to represent the United States’ interests within the scope of ISO/TC122.
ASC MH10 – Structure and ANSI Approved Standards

ASC MH 10
Secretariat: MHI

- SC 3 Performance Testing (ASTM)
- SC 4 Packaging & Environment
- SC 5 Vocabulary
- SC 8 Coding & Labeling
- SC 9 Household Goods Shipments
- SC 13 RTS

ASC MH10.8.1
ASC MH10.8.3
ASC MH10.8.6
ASC MH10.8.7
ASC MH10.8.8
ASC MH10.8.11
ASC MH10.8.12
ASC MH10.8.14
ASC MH10.8.15
ASC MH10.8.16
## ASC MH10/SC 8 Standards

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<th>Committee</th>
<th>Number</th>
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<td>ASC MH10.8</td>
<td>MH10.8.1</td>
<td>Shipping Label Standard</td>
<td>Published 2006 Approval Draft sent to MH10 2012-06-26</td>
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<tr>
<td>ASC MH10.8</td>
<td>MH10.8.2</td>
<td>Data &amp; Application Identifier standard</td>
<td>Published Continuous Maintenance</td>
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<tr>
<td>ASC MH10.8</td>
<td>MH10.8.3</td>
<td>Syntax for High Capacity ADC Media</td>
<td>Published 2002 Reaffirmed 2008 Reaffirmed 2012</td>
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<td>ASC MH10.8</td>
<td>MH10.8.4</td>
<td></td>
<td>Retired in favor of ISO 17364</td>
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<td>ASC MH10.8</td>
<td>MH10.8.5</td>
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<td>ASC MH10.8</td>
<td>MH10.8.6</td>
<td>Product Packaging standard</td>
<td>Published 2003 Published 2013-10-04</td>
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<td>ASC MH10.8</td>
<td>MH10.8.7</td>
<td>Product Marking standard</td>
<td>Published 2005 Approval Draft 2013-08-13 To be withdrawn with next revision of ISO 28219</td>
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<td>MH10.8</td>
<td>RFID for Parcels, Packages and Flat Mail</td>
<td>Published 2006 Reaffirmed 2012</td>
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<td>MH10.8.9</td>
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<td>MH10.8.10</td>
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<td>Retired in favor of ISO 17366</td>
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<td>MH10.8.11</td>
<td>Unit loads and transport packages for North American border crossings</td>
<td>PINS Filed 2006-09-15</td>
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<td>MH10.8.12</td>
<td>Component Marking Standard</td>
<td>Published 2011</td>
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<td>MH10.8.13</td>
<td>Label Test Procedures for Bar Code and Two-Dimensional (2D) Label</td>
<td>In Ad Hoc Development</td>
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<td>MH10.8.14</td>
<td>Unique Digital Identifier</td>
<td>On hold pending ISO 29161</td>
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<td>MH10.8.15</td>
<td>XML Reader Output from ISO/IEC 15434 formatted AIDC Media</td>
<td>Published 2011</td>
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<td>MH10.8.16</td>
<td>Label Adhesive Characteristics, Print Image Durability and Label Recyclability</td>
<td>Subject matter being addressed in MH10.8.13</td>
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## TC 122 – Work items managed by TC122

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<tr>
<td>780</td>
<td>Packaging -- Pictorial marking for handling of goods, 4&lt;sup&gt;th&lt;/sup&gt; Edition</td>
<td>NP</td>
<td>DIS ballot registered 2013-12-15</td>
<td>Published 1984, 1985, 1997; Graphics grandfathered into ISO 7000. Current Work Item to bring 780 graphics into compliance with ISO 7000. Reverted to CD.</td>
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<td>3394</td>
<td>Packaging -- Complete, filled transport packages and unit loads -- Dimensions of rigid rectangular packages, 3&lt;sup&gt;rd&lt;/sup&gt; Edition</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Ed IS</td>
<td>Published 2012-10-05</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Edition Published 1975</td>
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<td>3676</td>
<td>Packaging -- Complete, filled transport packages and unit loads -- Unit load dimensions, 2nd Edition</td>
<td>2nd Ed IS</td>
<td>Published 2012-10-05</td>
<td>1st Edition Published 1983</td>
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<tr>
<td>17350</td>
<td>Direct Marking on Plastic Returnable Transport Items (RTIs)</td>
<td>TR</td>
<td>Approved 2012-10-23</td>
<td>Graphics provided in ISO format Awaiting publication</td>
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<tr>
<td>17351</td>
<td>Packaging -- Braille on packaging for medicinal product</td>
<td>IS</td>
<td>Published 2013-01-09</td>
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<td>17370</td>
<td>Application Guideline on Data Carriers for Supply Chain Management</td>
<td>TR</td>
<td>Approved 2012-10-23</td>
<td>Graphics provided in ISO format Awaiting publication</td>
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<td>17451-1</td>
<td>Packaging -- Numeric Codification of Contents for Electronic Inventories and Manifests of Household Goods and Personal Effects Shipments -- Part 1: Messaging and coding of inventory numbers, locations and exceptions</td>
<td>NP/DIS</td>
<td>Cancel date: 2013-06-24</td>
<td>Sponsored by the International Association of Movers. Published ANSI standard. Recommended to TC 122 by ANSI.</td>
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<tr>
<td>18616-1</td>
<td>Returnable transport system -- Reusable, rigid plastics distribution boxes -- Part 1: General purpose application</td>
<td>NWIP</td>
<td>NP approved - 2013-01-28</td>
<td>Working Drafts in process</td>
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<td>18616-2</td>
<td>Returnable transport system -- Reusable, rigid plastics distribution boxes -- Part 2: General specifications for testing</td>
<td>NWIP</td>
<td>NP approved - 2013-01-28</td>
<td>Working Drafts in process</td>
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<td>22742</td>
<td>Packaging — Linear bar code and two-dimensional symbols for product packaging</td>
<td>2nd Ed IS</td>
<td>Published 2010-12-15</td>
<td>Former work of TC 122/WG 7 Next scheduled review: 2015-12-15</td>
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## Work Items Presently Under Ballot

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| 28219     | Packaging — Labelling and direct product marking with linear bar code and two-dimensional symbols | New 2<sup>nd</sup> Ed  
New NP-CD  
Published 2009-01-15  
2<sup>nd</sup> Edition  
Formerly work of TC 122/WG 7  
NP/CD Ballot Approved – 2013-10-25  
CD ballot closes 2014-02-03 |
| 21067     | Packaging — Vocabulary                           | New 5<sup>th</sup> Ed  
DIS  
CD ballot closed 2013-05-05  
Meeting 2013-12-18 |
ISO/TC 122/WG 12

Supply Chain Applications of Logistics Technology

The Internet of Things (IoT)
IoT in Packaging

Smart packaging - From the shelf and dairy case to the internet of things

Gail Barnes PhD, Partner, Personify LLC
Active and Intelligent Packaging Association (AIPIA) Congress, (Nov. 2–4) during Pack Expo International and Pharma Expo 2014 (Nov. 2–5), McCormick Place, Chicago, IL.
IoT in Packaging

Connected Medical Devices in the Internet of Things

Emergency Response, Patient Safety, Imaging, Surgery, Advanced Treatment

IoT in Packaging

2014 Top Tech Trends

1) Internet of Things

The IoT promises to be the most disruptive technological revolution since the advent of the World Wide Web. Projections indicate that up to 100 billion uniquely identifiable objects will be connected to the Internet by 2020, with enormous technical, socioeconomic, political, and even spiritual consequences.

IoT in Packaging

The Internet of Things

The Internet of Things for Medical Devices - Prospects, Challenges and the Way Forward


Defining ‘The Internet of Things’ for pharmaceutical processing and packaging

*Pack Expo presenter stresses that new data networking capabilities are allowing pharmaceutical organizations to complete tasks not possible just a few years ago.*

By Melissa Larson, Contributing Editor
Early examples of products entering the mass market include performance monitoring footwear from Nike and Adidas, and performance monitoring underclothes from RLP and Under Armour, all geared towards providing the athlete bio-sensor collected data that can be tied to athletic performance through analytics.

Under Armour Foresees Electronic Clothing Apparel maker envisions clothes that can track movement, biorhythms

“I can’t speak to the specifics of products we’re developing, but we strongly believe that in the future, all products will be ‘smart,’” said Robin Thurston, Under Armour’s senior vice president of connected fitness...”
How the ‘Internet of Things’ is Poised to Transform the World of Pharma

Tue, 12/23/2014 - 1:37pm

Tom Egan, Vice President, Industry Services, PMMI, The Association for Packaging and Processing Technologies


Printed Electronics, Intelligent Packaging and the “Internet of Things.”

By Don Carli

http://www.gaa.org/magazine/printed-electronics-intelligent-packaging-and-%E2%80%9Cinternet-things%E2%80%9D
IoT in Packaging

Internet Of Things: Ready For Prime Time In Consumer Packaged Goods
by Seth Moser, November 26, 2014

A Saviance Technologies Whitepaper
Will the Internet of Things Analytics Revolutionize the Healthcare Industry?
http://saviance.com/whitepapers/internet-health-industry
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<td>15394</td>
<td>Packaging -- Bar code and two-dimensional symbols for shipping, transport and receiving labels</td>
<td>2\textsuperscript{nd} Ed IS</td>
<td>Published 2009-04-13</td>
<td>Formerly work of TC 122/WG 4 NP/CD Ballot Approved – 2013-10-25</td>
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<td>22742</td>
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<td>28219</td>
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<td>Published 2009-01-15</td>
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<td>17363</td>
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<td>2\textsuperscript{nd} Ed IS</td>
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<td>17364</td>
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<td>NWIP</td>
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<td>18575</td>
<td>Internet of Things (IoT) in the supply chain -- Products &amp; product packages</td>
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Conclusions

What to watch as medical device packaging engineers...

1. ISO TC122/sc3 (MH10 SC3) Test methods
2. ISO TC122/sc4 (MH10 SC4) Packaging and the Environment
   1. ISO 18601
   2. ISO 18603
3. ISO TC122/WG 14 –Label Materials (MH10 SC 8 Coding & Labeling)
4. ISO TC122/WG 12-Logistics technology (No parallel MH10 SC)
   1. 18575, IoT in the supply chain--Product and Product Packages
5. ISO TC122/WG 9 Accessible design (No parallel MH10 SC)
Thank you!!!