

# National Standardisation Programme & Case Studies on the Benefits of Standards

Seet Choh San  
Deputy Chairman  
Quality & Safety Standards Committee



**Safety Case  
Symposium 2018  
Singapore**

# Singapore Standardisation Programme

**SPRING  
Singapore**

Administers the **Singapore Standardisation Programme** under the industry-led **Singapore Standards Council**

Partners with IMDA and industry associations like IES, SCIC and SMF as **Standards Development Organisations (SDOs)**

Works with over **1,600 partners** who participate in more than **150 Standards Committees, Technical Committees and Working Groups**

Coordinates standards development, promotion and adoption of some **600 Singapore Standards** in industries like

- Biomedical & Health
- Building & Construction
- Chemical
- Electrical & Electronic
- Environment & Resources
- Food
- Information Technology
- Manufacturing
- Quality & Safety
- Services

**Standards  
and  
Safety Case**

**IMDA** : Infocomm Media Development Authority  
**IES** : Institution of Engineers Singapore  
**SCIC** : Singapore Chemical Industry Council  
**SMF** : Singapore Manufacturing Federation

# Drivers - Standards@Singapore

Build Trust in Singapore Products, Services and Enterprises to Drive Economic Growth



- Develops and promotes standards in priority areas
- Adopts or participates in developing international standards, where possible.

\* Private Sector

# Players - SPRING & the Standards Council



**SPRING**  
Singapore's  
National Standards Body

- Administers the SG Standardisation Programme
- Formulates the policies, strategies, programmes and procedures of the Singapore Standardisation Programme
- Publishes voluntary SG standards (SS) and Technical References (TRs)
- Influences and safeguards SG's interest at international and regional standards forums



**Singapore Standards Council**  
(appointed by SPRING)

- Industry-led
- Approves the establishment and withdrawal of SS
- Set up Committees & Working Groups to develop new standards and review existing standards
- Advises and assists SPRING in implementing the policies, strategies, programmes and procedures of the SG Standardisation Programme

# Singapore Standards Committees



## STANDARDS COMMITTEES

- Overseeing standardisation work in specific sectors



Biomedical & Health



Building & Construction



Chemical



Electrical & Electronic



Food



Information Technology



Environment & Resources



Quality & Safety



Services



Manufacturing

## TECHNICAL COMMITTEES

- Overseeing standardisation work in specific focus areas

## WORKING GROUPS

- Draft new standards and review existing standards

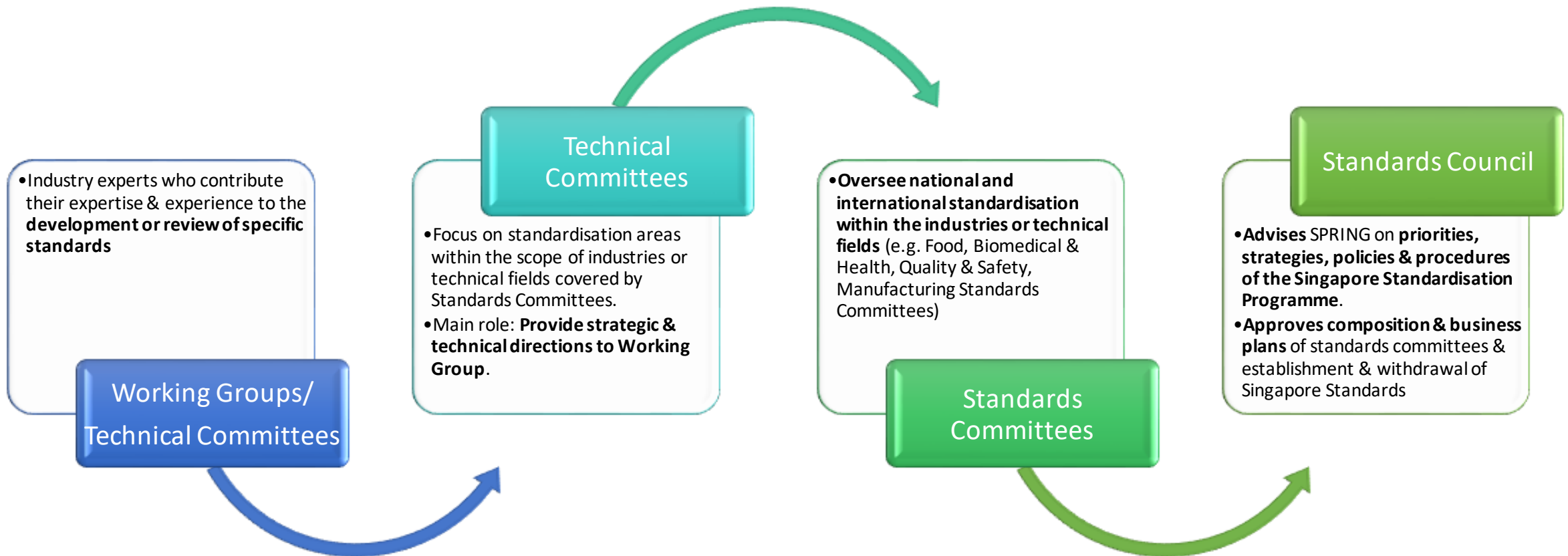
Coordinating Committee for Smart Nation (CCSN)

Coordinating Committee for Silver Industry (CCSI)

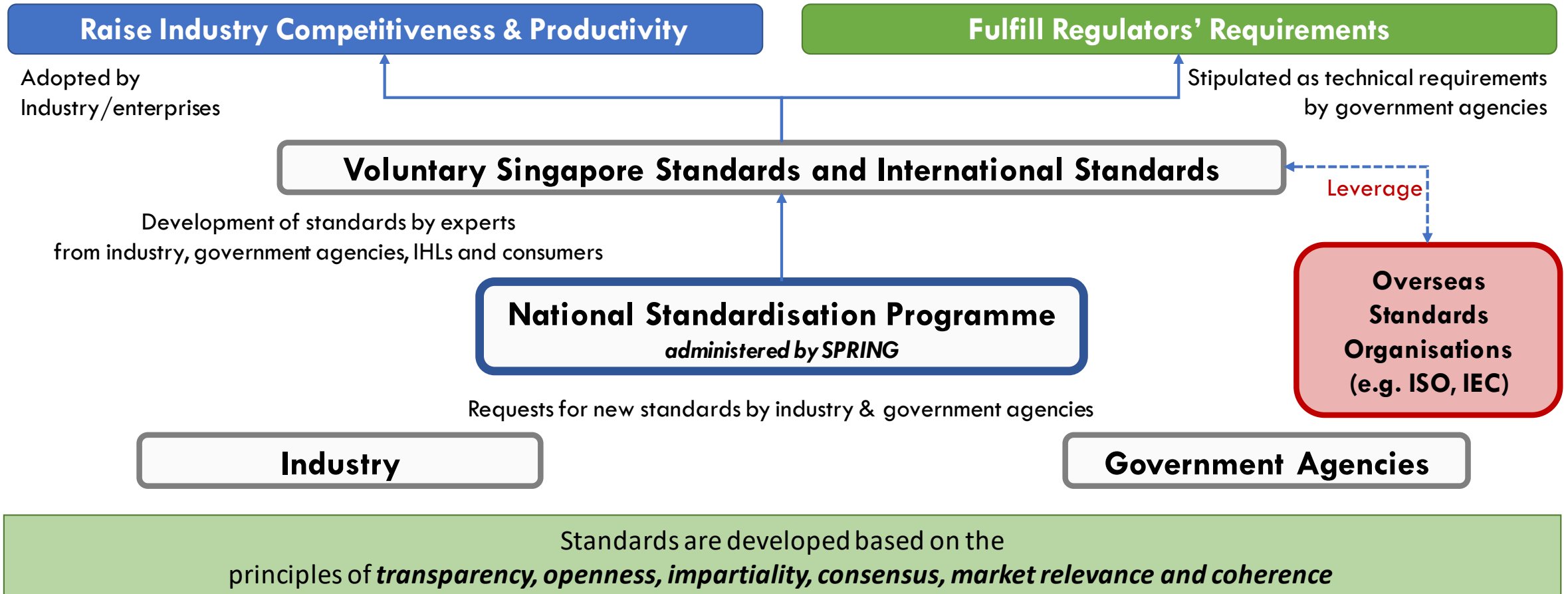
Taskforce on Marketing & Communication

# Council ... Committees ... Working Groups

## How they fit



# Private & public partnership



# National Mirror Committees (NMC)

## Environment & Resources

ISO/TC 207 Environmental Management  
ISO/TC 224 Service activities relating to drinking water supply systems and wastewater systems - Quality criteria of the service and performance indicators  
ISO/TC 242 Energy management  
ISO/TC 257 Evaluation of energy savings

## Information Technology

ISO/TC 68 Banking and related financial services  
ISO/IEC JTC1/SC17 Cards & personal identification  
ISO/IEC JTC1/SC27 IT Security Techniques  
ISO/IEC JTC1/SC37 Biometrics

## Quality & Safety

ISO/TC 44 Welding and allied processes  
ISO/TC 176 Quality management  
ISO/TC 254 Safety of attractions  
ISO/PC 283 Occupational health and safety management systems

## Chemical

ISO/TC 28 Petroleum products and lubricants  
ISO/TC 45 Rubber and Rubber products  
ISO/TC 61 Plastics  
ISO/TC 229 Nanotechnology

## Building & Construction

ISO/TC 59 Buildings and civil engineering works  
ISO/TC 71 Concrete, reinforced concrete and pre-stressed concrete  
ISO/TC 182 Geotechnics  
ISO/TC 268 Sustainable development in communities

## Electrical & Electronic

IEC/TC 34 Lamps and related equipment  
IEC/TC 47 Semiconductor Devices  
IEC/TC 82 Solar photovoltaic energy systems

## Manufacturing

ISO/TC 67 Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries  
ISO/TC 261 Additive manufacturing (3D printing)  
ISO/TC 299 Robotics

## Biomedical & Health

ISO/TC 121 Anaesthetic and respiratory equipment  
ISO/212 Clinical laboratory testing and in-vitro diagnostic test system  
ISO/TC 217 Comestics  
ISO/TC 249 Traditional chinese medicine



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**Standards and Safety Case**

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# Standards and Safety Case #1

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I need a  
common language ...

**Standards!**



Biomedical & Health



Building & Construction



Chemical



Electrical & Electronic



Food

SINGAPORE STANDARDS COUNCIL

SS 532 : 2016  
(ICS 13.220, 13.300)

SINGAPORE STANDARD

**Code of practice for the storage of flammable liquids**

Incorporating Corrigendum No. 1

Published by **SPRING singapore**  
Enabling Enterprise

SINGAPORE STANDARDS COUNCIL

SS 557 : 2010  
(ICS 91.200)

SINGAPORE STANDARD

**Code of practice for demolition**

(Formerly CP 11)

Published by **SPRING singapore**  
Enabling Enterprise

SINGAPORE STANDARDS COUNCIL

SS 588 : Part 2 : 2013  
(ICS 13.340.60)

SINGAPORE STANDARD

**Personal equipment for protection against falls – Rope access systems**

– Part 2 : Code of practice

SINGAPORE STANDARDS COUNCIL

SS 571 : 2011  
(ICS 13.110)

SINGAPORE STANDARD

**Code of practice for energy lockout and tagout**

(Formerly CP 91)

Published by **SPRING singapore**  
Enabling Enterprise

SINGAPORE STANDARDS COUNCIL

SS IEC 62109-1 : 2016  
(ICS 27.160)

SINGAPORE STANDARD

**Safety of power converters for use in photovoltaic (PV) power systems**

– Part 1 : General requirements

[Identical adoption of IEC 62109-1 : 2010]

SINGAPORE STANDARDS COUNCIL

SS ISO 10218-2 : 2016  
ISO 10218-2 : 2011, IDT  
(ICS 25.040.30)

SINGAPORE STANDARD

**Robots and robotic devices – Safety requirements for industrial robots**

– Part 2 : Robot systems and integration

Published by **SPRING singapore**  
Enabling Enterprise



Information Technology



Environment & Resources



Quality & Safety



Services



Manufacturing

Is this safety standard  
**Voluntary?**

Mostly ... except ...

# ACOPs

- **Approved**
- **Codes**
- **Of**
- **Practice**

FRIDAY, NOVEMBER 11, 2016 1

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First published in the *Government Gazette*, Electronic Edition, on 11th November 2016 at 5.00 pm.

**No. 3365 — WORKPLACE SAFETY AND HEALTH (CHAPTER 354A)**

**WORKPLACE SAFETY AND HEALTH  
(APPROVED CODES OF PRACTICE)  
NOTIFICATION 2016**

In accordance with section 40B(3) of the Workplace Safety and Health Act (Cap. 354A), the Workplace Safety and Health Council hereby notifies that the Council has approved the Codes of Practice set out in the Schedule, with effect from 21 November 2016.

2. The approved Codes of Practice may be inspected at the place and time and on such days as follows:

Place: Workplace Safety and Health Council  
1500 Bendemeer Road, #04-01  
Ministry of Manpower Services Centre  
Singapore 339946

Day: Mondays to Fridays  
(public holidays excepted)

Time: 9.00 a.m. to 1.00 p.m.  
2.00 p.m. to 5.00 p.m.

THE SCHEDULE

<i>Approved Codes of Practice</i>	<i>Year Published</i>
1. Code of Practice for Working Safely at Heights	2013
<b>2. Code of Practice on WSH Risk Management</b>	<b>2015</b>
3. Code of Practice on Safe Lifting Operations in the Workplaces	2014
4. SS 98: Specification for industrial safety helmets	2013
5. SS 280: Specification for Metal scaffoldings Part 1: Frame scaffoldings	2006
6. SS 280: Specification for Metal scaffoldings Part 2: Modular scaffoldings	2009
7. SS 311: Specification for Steel tubes and fittings used in tubular scaffolding	2005
8. SS 343: Specification for lifting gear — Part 1: Wire rope slings	2014
9. SS 343: Specification for lifting gear — Part 2: Hooks	2014
10. SS 343: Specification for lifting gear — Part 3: Shackles	2014
11. SS 473: Specification for Personal eye-protectors Part 1: General requirements	2011

GOVERNMENT GAZETTE

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— continued

SINGAPORE GOVERNMENT GAZETTE

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Year Published  
2009

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THE SCHEDULE — *continued*

*Approved Codes of Practice*

<i>Approved Codes of Practice</i>	<i>Year Published</i>
26. SS 514: Code of Practice for	
27. SS 528: Specification for Part 1: Full-body harnesses	
28. SS 528: Specification for Part 2: Lanyards and energy	
29. SS 528: Specification for Part 3: Self-retracting lifelines	
30. SS 528: Specification for Part 4: Vertical rails and sliding-type fall arresters	
31. SS 528: Specification for Part 5: Connectors with self	
32. SS 528: Specification for Part 6: System performance	
33. SS 531: Code of Practice for Part 1: Indoor	
34. SS 531: Code of Practice for Part 2: Outdoor	
35. SS 531: Code of Practice for Part 3: Lighting requirements in work places	
36. SS 532: Code of Practice for Incorporating Corridors	
37. SS 536: Code of Practice for (Formerly CP 37)	
38. SS 537: Code of Practice for Part 1: General requirements	
39. SS 537: Code of Practice for Part 2: Woodworking machines	
40. SS 541: Restraint belts Amendment No.1 (2012)	
41. SS 548: Code of Practice for respiratory protective devices (Formerly CP 74)	
42. SS 549: Code of Practice for maintenance of hearing protection (Formerly CP 76)	
59. SS 588: Personal equipment for protection against falls — Rope access systems Part 1: Fundamental principles for a system of work	2013
60. SS 588: Personal equipment for protection against falls — Rope access systems Part 2: Code of practice	2013
61. SS 595: Steel wire ropes for hoisting — Part 3: Code of practice for the care, inspection and maintenance of steel wire ropes for hoisting	2014
62. SS 598: Code of Practice for Suspended scaffolds	2014
63. SS 607: Specification for design of active fall-protection systems	2015
64. CP 5: Code of Practice for Electrical installations Amendment No. 1 (2008)	1998
65. CP 14: Code of Practice for Scaffolds	1996
66. CP 63: Code of Practice for The lifting of persons in work platforms suspended from cranes	1996 (2005)
67. CP 79: Code of Practice for Safety management system for construction worksites	1999
68. CP 88: Code of Practice for Temporary electrical installations Part 1: Construction and building sites	2001
69. CP 88: Code of Practice for Temporary electrical installations Part 2: Festive lighting, trade-fairs, mini-fairs and exhibition sites	2001
70. CP 88: Code of Practice for Temporary electrical installations Part 3: Shipbuilding and ship-repairing yards	2004
71. CP 99: Code of Practice for Industrial noise control	2003

**Revocation**

3. The Workplace Safety and Health (Approved Codes of Practice) Notification 2015 is revoked.

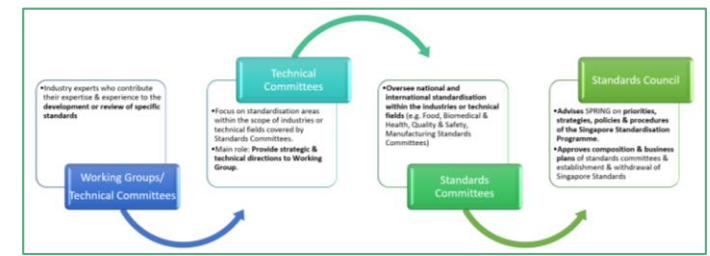
Made this 4th day of November 2016.

HENG CHIANG GNEE  
*Chairman, Workplace Safety and Health Council  
Singapore*

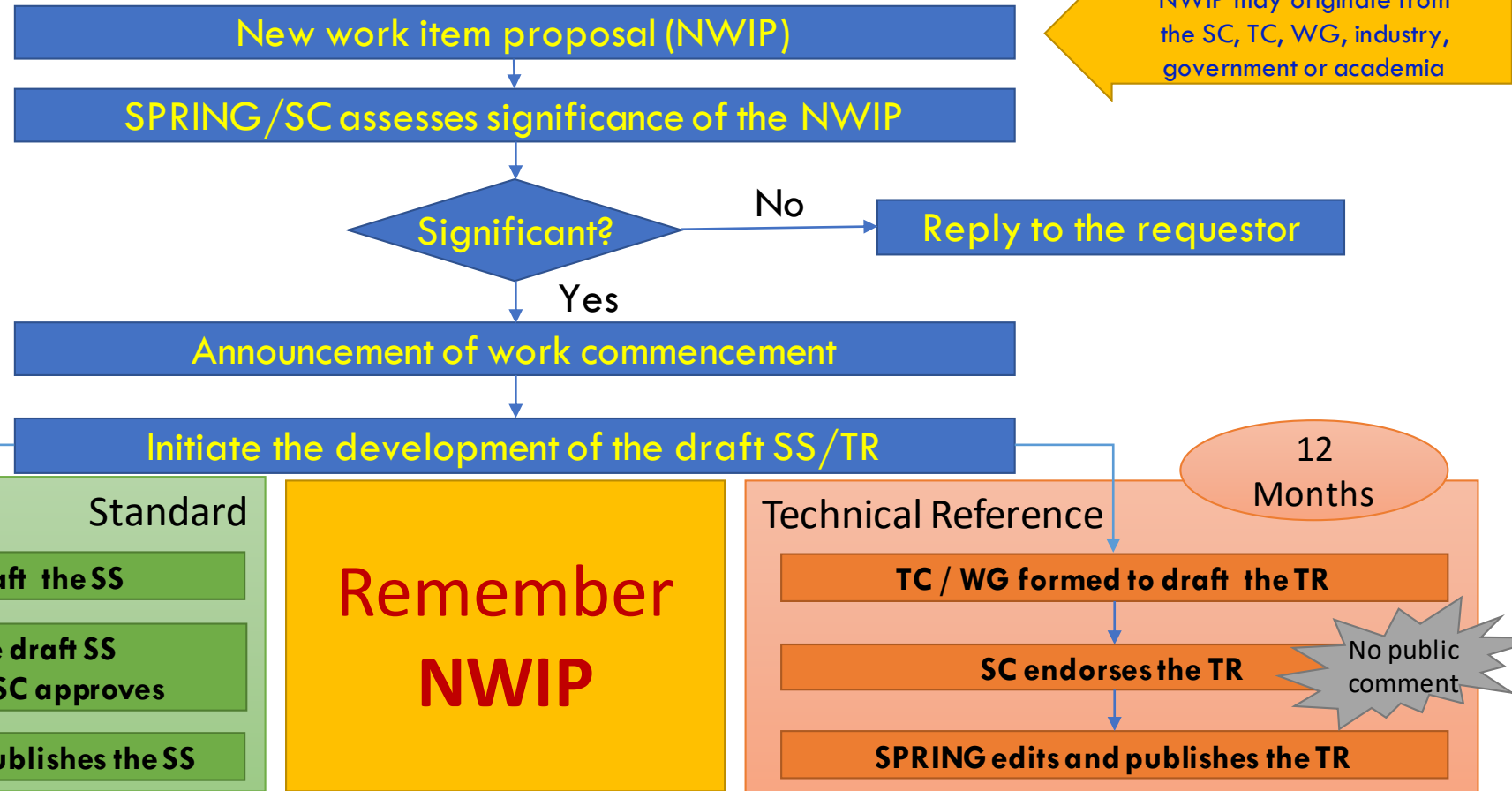
The industry  
needs a standard!

Remember ... **NWIP**

# Standards development process



Code	Definition
SC	Standards Committee
TC	Technical Committee
WG	Working Group
SS	Singapore Standard
TR	Technical Reference



# Standards ... keep it handy!

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# National Standardisation Programme & Case Studies on the Benefits of Standards

## Thank you!

**Seet Choh San**

**Deputy Chairman**

**Quality & Safety Standards Committee**



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Symposium 2018  
Singapore**

[www.SafetyCaseSymposium.com](http://www.SafetyCaseSymposium.com)