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Prologue: What is a Standard? Answer (according to ISO); Quote: *A Standard is a document that provides requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes and services fit for their purpose.* Unquote.

1. In recorded history, mankind had been on the quest to discover ways & means to produce and manufacture tools & appliances, and developing & refining governance operating systems to support life's existence in an orderly and sustainable manner. In essence, that required consistence and repeatability as in standardisation, or the metrology for: weights & measures; time & speed; days & seasons; direction & distance; temperature & pressure; currency denominations & values; transportation & logistics; etc.
2. More than two millenniums ago two great empires existed "side by side" that demonstrated the wisdom of utilising "the best practice" approach in developing national infrastructures and their "well-oiled war machines". Emperor's decrees were instructions & command; and if there were directed towards the development and operation & maintenance of infrastructures & facilities, they would be the equivalent of today's "Standards and Quality" centric technical instructions. Obey or else. Standardisation was imposed.
3. The said empires were the Roman Empire to the West in Europe, and the Han Dynasty in China to the East. Each was a "stand-alone" economic powerhouse that hardly had any contact or arrangement with the other. The realisation, in due course, of a land bridge to satisfy the potentially profitable "Supply and Demand Equation" of cross border trade (CBT) that came to be known as: the "Silk Road" was only a question of time, thanks to opportunist and shrewd "middleman" traders located in the buffer zone of the two great empires.
4. Any student of history can perhaps recall the name: Zhang Qian; Han Emperor Wudi's Envoy despatched to the unknown "wild wild West" in the second century BC; who returned after 2 missions with details ~ causing the track & foot-prints of the Silk Road to be formed; and the path way to India wherein the 'wisdom' in Buddhism existed; not forgetting the martial art of 'Kong Fu'.
5. The Silk Road was the mother of CBT ecosystems, underpinned by consumer demand for: "Standards & Quality" (read: cheap & good, i.e. fit-for-purpose goods). Silk Road CBT was World Trade of the ancient civilisation.
6. Study of History will reveal the fact that among measures undertaken to strengthen and enriching the Empire (albeit for the Emperor & Family and the ruling class & officials + the "usual hangers-on") was: "standardisation"; a game-changer that brought prosperity to the citizenry of the society. Reason: standardisation reduces the cost of doing business to give value for money.
7. Fast-forward some nineteen centuries into the turn and the early couple of decades of the Twentieth Century when the largest Empire, by far, was in her heydays (peak: 1921); the British Empire wherein the Sun never set – so said.
8. Britain was "Great Britain" then, and no one disputed that claim. She ruled the waves of the Seven Seas and some half a billion people, which worked out to be about a quarter of the World's population then; occupying about a quarter of the Earth's total land area. Commercially and economically; it was "Buy British First" and all the time! To the British Industries and Services Suppliers Sector of the day, it was a global market by any description, deserving the formalities that went with it. "It is quality stuff" – say it loud and clear! How loud and clear can the Brits say it than by founding: The British Standards Institute

- (BSI); no less by a Royal Charter (in 1921), befitting Imperial Great Britain. BSI had its beginning in 1901 with its present name formalised 1931. The “BS” mark was an assurance of British quality for the “global market”.
9. The centre of gravity of the British Empire was “Whitehall”. Control and Command over the Empire was the Order of the Day. Communication must be quick & prompt. It was British telegraphy technology that provided the means to exercise Whitehall’s “control & command” for timely action/response.
 10. However during the mid Nineteen Century when the commercial telegraph first made its appearance; there were a number of operating systems (mostly cable systems that included trans-continental submarine cable systems), not only in Europe but also in the United States. Remember the “Morse” code? It does not take much imagination to appreciate the complications involved in cross-border inter-systems communication until an agreed protocol for operating platforms could be organised among various nations & stakeholders responsible for international telegraph and telephony systems (both wired and wireless). ITU came into being in 1865; the first truly international standards body that facilitated seamless international communication of a global nature.
 11. The era of the telegraph and telephony was the golden age of physics as in electricity – applied physics. There was much going on in the R&D and commercialisation of electricity supplies & related equipment and products that eventually lead to the founding of the IEC in 1906. It took two years in the formation when international stakeholders realised that technical societies representing the respective national electrical engineering profession should cooperate internationally to achieve standardisation in Nomenclature and ratings of electrical apparatus and machineries.
 12. Controlling the waves of the Seven Seas required much technology and an international arrangement to “tell the time of day” with reference to a fixed point. Exerting its influence and stamping her status as the World’s leading maritime power, Great Britain established the Greenwich Mean Time (GMT) with Greenwich (near London) providing the reference for the “zero degree” longitude (the Greenwich Median) in the maps of the Atlas. Based on GMT – the Time Standard was thus established with the International Date Line drawn and 24 time zones established. Not only was ocean going naval navigation made possible, dependable time tables for train journeys were established. For Aviation & Space travels; Time Standard is essential. One can go on and on concerning the fundamental importance of Time Standard.
 13. Leaving behind good times, we shall now review momentous changes that took place in the World after the conclusion of the destructive WW II.
 14. At the height of WW II with the Battle of Britain raging, islanded Britain (with the assistance of Commonwealth forces) was facing the brunt of Nazi German’s War Machine that was throwing every thing at her; except the kitchen sink. To survive German’s onslaught, defiant Britain under Prime Minister “Bulldog Churchill” turned to the US for assistance; which came in the form of the Lend-Lease Arrangement. The Americans provided Britain the necessary Hardwares & Weaponries to fight the War.
 15. The Germans were kept at bay on the other side of the English Channel, and after the D-Day invasion of German occupied Europe; the War was won; in another 4 years. But it wouldn’t be so if the Brits and their Allies did not resolve one small but crucial detail; the bolts & nuts, and screws & other fixtures on American Lend-Lease equipment, plants & weapons were of different standards that needed desperate resolution. As the saying goes: “the devil is in the details”. In deed it was, & happening in a life & death struggle!
 16. Never again. With the eventual defeat and surrender of both Germany & Japan in 1945, WW II ended. The UN was formed, together with the “Bretton Woods” institutions such as the IBRD of the World Bank Group, the IMF, and the stillborn ITO (replaced some 50 years later by the WTO in 1995). The ISO was caused to be founded in 1947, providing “International Standards” to lay down the base line for standards & quality in post-War reconstruction and development that will bring prosperity to the peoples of the World thus peace for Mankind. That same Year, ITU became an Agency of the UN, providing the international regulatory framework for all forms of telecommunication, resulting in a disciplined and highly successful advancement of global ICT.

Summary:

17. It is ICT (powered by IEC Standards centric Electrics) that has “flattened the world” giving rise to the “Global Village” that is on a 24/7 real-time & on-line “smart subsistence”: giving meaning to the phenomenon of Globalisation.
18. Thanks to Time Standard, the Global Village is “time-banded”; effectively putting every one on Planet Earth on the preverbal “same page” with English as the working language for e-commerce, p-to-p and soon, IoT connectivity.
19. Another perspective of Globalisation is World trade vis-à-vis WTO and WTO rules-based Regional Economic Zones (such as ASEAN, NAFTA, TPPA, APEC, etc.). One of the more than a dozen multilateral agreements that underpin WTO is the Technical Barriers to Trade (TBT) Agreement that recognises International Standards such as the ITU, ISO and IEC to establish sector specific arrangement for free or freer CBT in regulated goods/products.
20. Besides CBT in Goods, there is CBT in Services. Example; Engineering & Construction Services. International standards for qualifications and cross border MRA based professional mobility of Engineering Services Professionals (ESPs) are those established by the International Engineering Agreements (IEA) Accords & Agreements; yet to be recognised by WTO via its General Agreement on Trade in Services (GATS).
21. For sustainability and a greener way of life driven by low carbon economies, there are ISO Standards providing the benchmarks for Good Regulatory Practices (GRP) relating to Domestic Regulations. Where and when possible, Domestic Regulations shall be International Standards centric; and for CBT in both Goods & Services, stakeholders’ preferred approach should be: “1 Standard, 1 Test and 1 Approval”; without another cross border retest (to same standard – worse still to another ‘national standard’) for Importer’s domestic approval. This amounts to Non-Technical Barrier (NTB) or Non-Technical Measurements (NTM) to Trade.

Conclusion:

22. Standards do drive Globalisation; barring NTB/NTM to CBT. Before I close, I take this opportunity to touch on the importance of Standards in ASEAN.

Footnote on the importance of Standards in ASEAN/AEC:

Wef 31st December 2015, the ASEAN Economic Community (AEC) has become a reality; and its planed evolution for the next ten years in the period; 2016 to 2025 is envisaged in the “AEC Blueprint 2025”, which laid down the deliverables to enable ASEAN (more so the AEC) to attaining five interrelated and mutually reinforcing characteristics, namely:

- A highly integrated and cohesive Economy;
- A competitive, innovative and dynamic ASEAN;
- Enhanced connectivity and sectoral cooperation;
- A resilient, inclusive, people-oriented and a people-centred ASEAN; and
- A Global ASEAN.

The said Blueprint is a 48 page, 91 para 10-year perspective plan. For this Footnote, reference is made to Para 24; under the planned deliverable of: “**Enhancing Participation in Global Value Chains**”; there is an element of ASEAN’s economy integration by achieving, Quote: **Harmonisation with international standards and support of standards compliance capacity building**. Unquote. (Ref. Section A.6.24ii of the AEC Blueprint 2025).

In closing: there you have it. Not only Standards drive Globalisation; Standards also drive an integrated and cohesive AEC that will be competitive, innovative and dynamic; enabling ASEAN Stakeholders to participate at the enhanced level of Global Value Chains. The springboard to that goal is for Stakeholders to be trained in Standards Compliance as a way of life in our occupation and profession.

Thank you.