

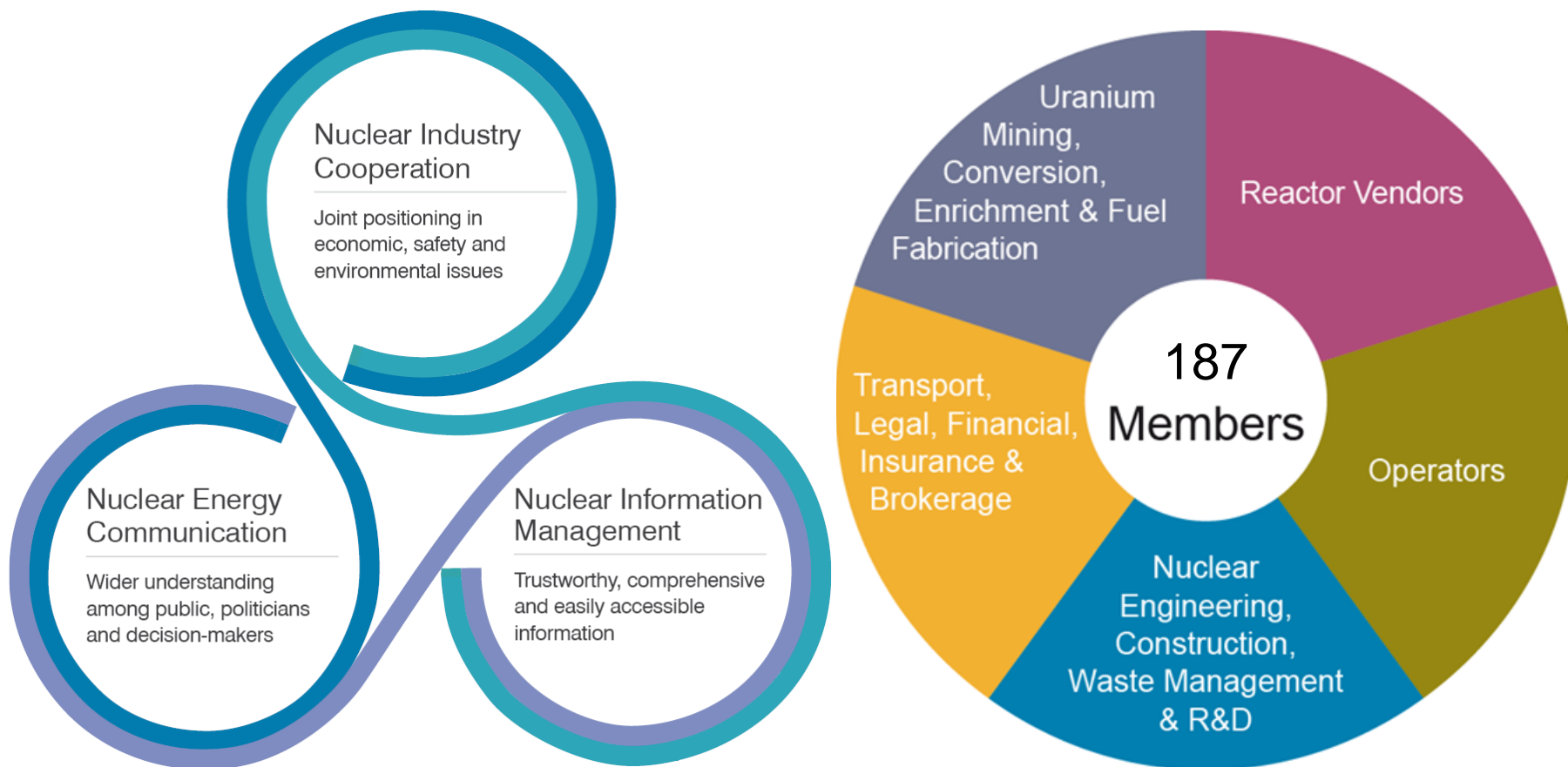
Round Table on Quality Management in the Supply Chain: Counteracting CFSI infiltration



Greg KASER
Staff Director – Supply Chain Working Group

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World Nuclear Association activities and members



World Nuclear Association at work

12 Working Groups:

- Fuel Cycle
- CORDEL (Regulation)
- Economics
- Supply chain
- Transport
- Law, etc.

Strategic outreach:

- Decision-makers
- Industry partners
- Media
- Business associations



Counterfeit, Fraudulent and Suspect (CFS) items

- Counterfeit
 - Items that are imitations of a legitimate product
- Fraudulent
 - Items that are misrepresented with an intention to deceive
- Suspect
 - Items where there is a suspicion that they may not be genuine



Classification of CFSIs

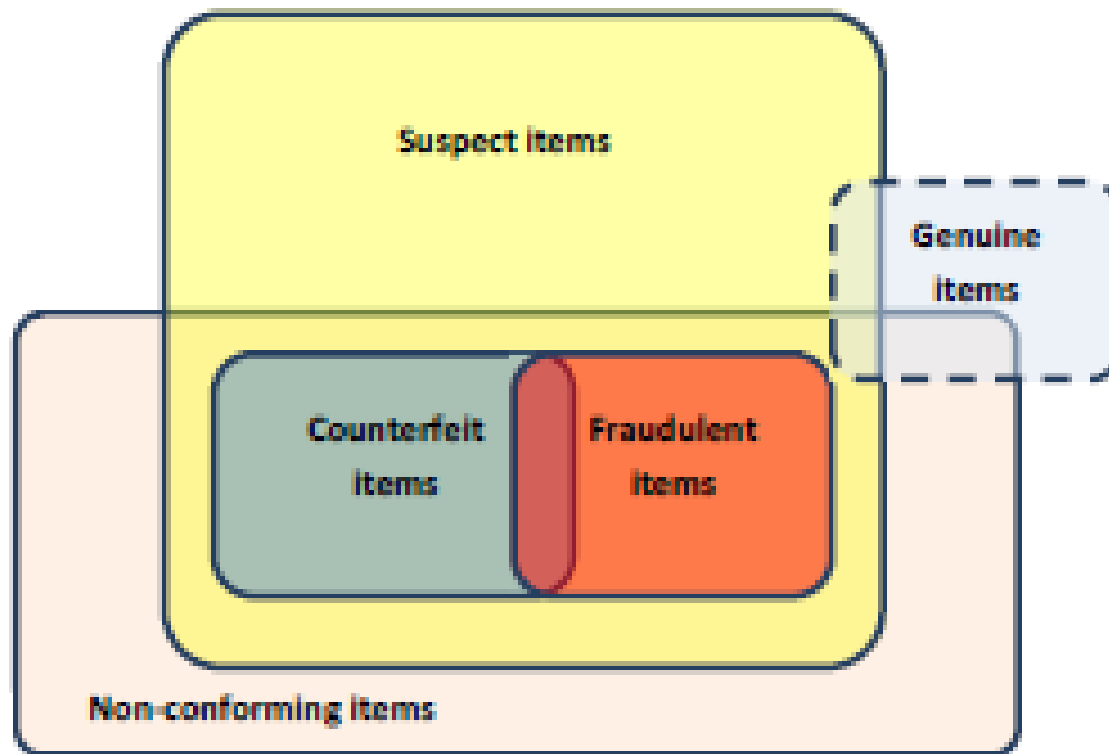
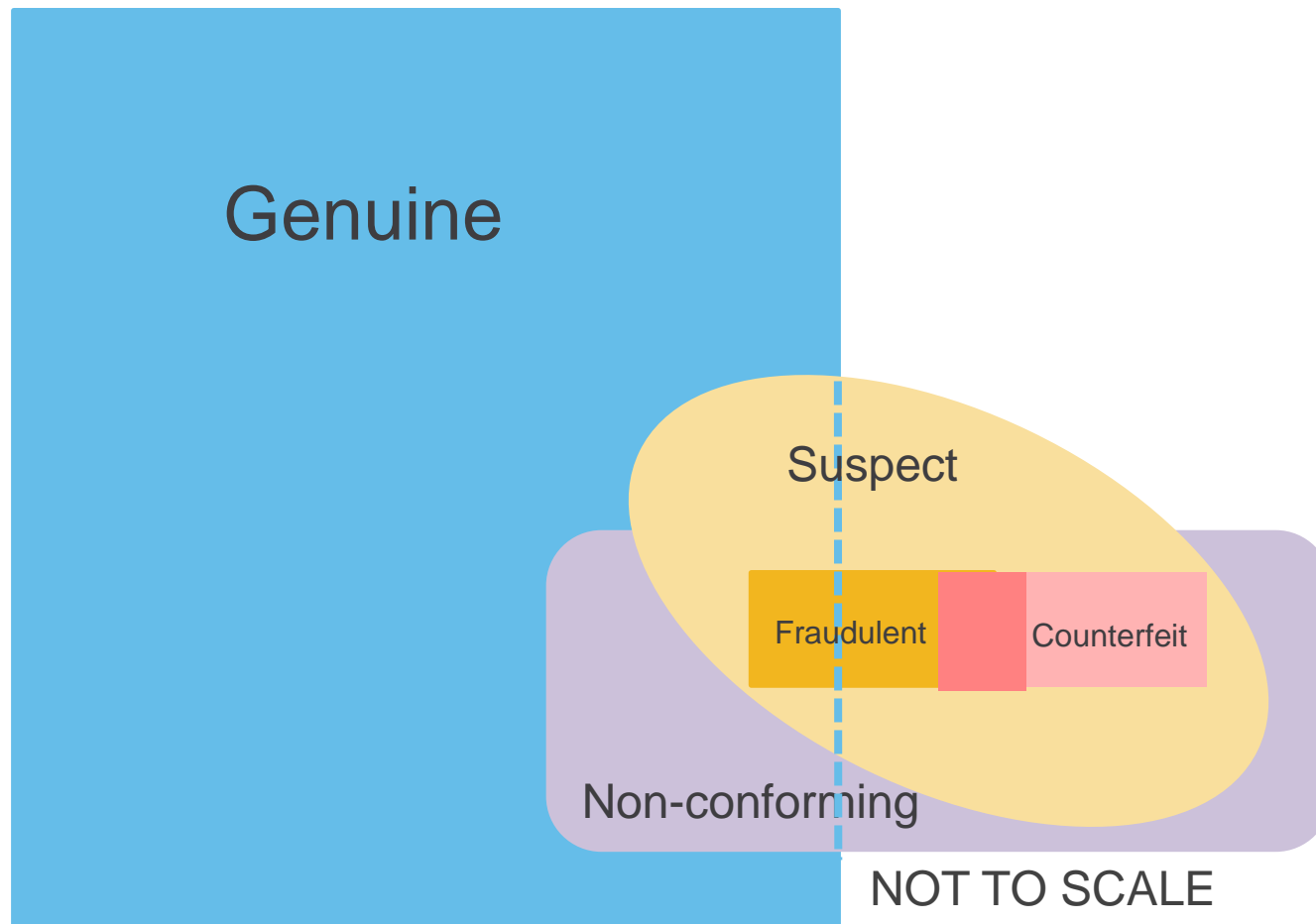


FIG. 31. CFSI classification.

IAEA, 2016, Procurement Engineering and Supply Chain Guidelines in Support of Operation and Maintenance of Nuclear Facilities, NP-T-3.21: Figure 31: p. 127.

Classification of CFSIs



Major cases of fraud

- Framatome: Tests had not been performed or recorded correctly and there had been quality assurance failures on components manufactured at the Le Creusot Forge in France since 1965, when the facility was owned by Schneider. Irregular practices had continued after 2006 when AREVA/ Framatome had purchased the facility and were not identified until 2015.
- Kobe Steel admitted in 2017 that 605 (mostly non-nuclear) customers had been misled as a result of falsification of quality inspection data for aluminium and copper products over the past 50 years. Customers said that the falsified data did not pose safety issues.
- In South Korea in 2012, eight companies were accused on supplying 60 forged quality control certificates covering 7,682 non-safety critical components to the Korea Hydro and Nuclear Power company since 2002. The affected equipment comprised mainly fuses, switches and cooling fans. Another case discovered in 2013 involved false test certificates for cabling.

Strategies for preventing the infiltration of CFS items

- **Design and specification**
 - Single source suppliers present a risk but also provides assurance
- **Procurement**
 - Understand the risk factors and triggers
 - Know your suppliers (verification of supplier's bona fides)
 - Keep it simple (limit use of brokers)
- **Quality assurance**
 - Supplier qualification and audits
 - Oversight of critical processes
 - Inspection and witness testing
 - Acceptance checks
- **Custody**
 - Trans-shipment vulnerabilities
- **Intelligence**
 - Notification of detected cases
 - Investigation of suspect items' origination

In-company culture & cross-cutting frameworks to prevent:

- Corruption of processes (e.g. backhanders from suppliers)
- Obfuscation of paper trails (e.g. missing or forged documents)
- Loss of institutional knowledge
- Theft of intellectual property

Empowering personnel to report suspicions

Take-away points

- Size of the problem is difficult to assess = < 1%?
- CFS items are an embedded feature of globalized markets (especially in electronics)
- Complex and flexible supply chains have vulnerabilities, especially to organized crime. A coordinated response from industry and governments is necessary
- Manufacturing locations are concentrated in Asia
- All reasonable efforts should be made to assure that the product meets the specification and any exceptions are notified to the purchaser and receives the purchaser's prior written approval prior to shipment
- Industry Quality Management System standards address CFS items

Thank you:

Greg KASER

World Nuclear Association

greg.kaser@world-nuclear.org

www.world-nuclear.org

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