

4S: Supply Chain, Standards, Sustainability & Smart Manufacturing



When I worked in manufacturing in Japan, the 5S principles became part of our daily mantra: *seiri* (整理), *seiton* (整頓), *seisō* (清掃), *seiketsu* (清潔), and *shitsuke* (躰). (Often translated as "sort", "set in order", "shine", "standardize" and "sustain".) These enduring principles certainly hold true to this day in microelectronics manufacturing. Today, I would like to focus on 4 S's that are particularly front and center at SEMI right now.

You don't need me to tell you how supply-chain issues rule the day in microelectronics – you only have to open up a browser or turn on the TV to hear about the latest – from pandemic-related issues, to automotive supply-chain challenges spilling over into broad industry shortages. And then there is the Suez Canal – another “S”! But there are 2 things near and dear to the [SEMI Smart Manufacturing Technology Community](#) that can help to build more resilient supply-chains, and perhaps even alleviate some of the short term pain.

Standards – When done well, industry standards can enable just-in-time manufacturing, streamline qualification and procurement, and improve overall manufacturing efficiency and yield – all enablers for a more robust supply-chain. Nowhere do we take this to heart more than in the SEMI Smart Manufacturing Technology Community. Machine-to-machine, information and control standards developed by [SEMI International Standards](#) volunteers (thank you!!) have enabled, and continue to enable, huge gains in manufacturing productivity and efficiency.

Sustainability – By following the tenets of reduce, recycle and reuse, and by working closely with the [SEMI Environment, Health, Safety & Sustainability](#) group, the Go Green initiative of the SEMI Smart Manufacturing Technology Community seeks to use Industry 4.0 capabilities to monitor and reduce use of energy, water and materials. This serves to make the supply-chain not only more sustainable, but also more resilient.

We are seeing signs that we can get through the pandemic. We will get through the global supply chain issues by pulling together as an industry. The real test is whether we can take this opportunity

to build a more sustainable and resilient supply-chain long term. The members of the SEMI Smart Manufacturing Technology Community are already working towards that goal.

Tom Salmon, Executive Director

FEATURE ARTICLE

Deloitte.

Enabling the End-to-End Digital Thread

Connecting product development to manufacturing to the field in the semiconductor equipment industry by becoming a Model-Based Enterprise. Guidance and insights - a SEMI exclusive from Deloitte Consulting, LLC.

UPCOMING EVENTS



Save the Date for the 2021 Global Smart Manufacturing Conference: October 19-21, 2021. The committee has begun planning the agenda and identifying speakers. Suggestions are welcome - email Ayo Kajopaiye at akajopaiye@semi.org.

PAST EVENT ACCESS



SEMICON China's [Smart Manufacturing Forum](#) was a highlight of the recently completed show, with >600 attendees and a sold-out (+waitlist) Smart Manufacturing Pavilion. The Forum featured presentations from Applied Material's Automation Products group, IKAS, BISTel, Huawei, and FA Software on AI, predictive functions, advanced process controls for Zero defects, traceability, and new ICTs. [Read about the show.](#)

CHAPTER NEWS

SEMI Americas Smart Manufacturing Chapter

Chapter committee work continues with the following efforts:

- The Fabs Subcommittee's Go Green committee has met and is focusing on building their group to represent front and backend companies, and coordinating with SEMI FOA to synchronize efforts.
- SEMICON West will be held December 7-9 as a Hybrid event – meaning both in person and online content will be featured. The Smart Manufacturing Pavilion planning Subcommittee is building a list of potential speakers and topics to feature.
- Smart Manufacturing Guidelines Subcommittee has kicked off its activity of building a Smart Manufacturing Maturity Model. The Subcommittee has created an initial version of the model and shared it with the full Chapter. Input is requested.

SEMI Europe Smart Manufacturing Chapter

SEMI Europe held a webinar to explore the critical topics around Industry 4.0 key initiatives, emerging roadmaps and standards. Speakers came from leading industry companies, including, Roland Berger, Applied Materials, PEER Group, and STMicro. Review the FREE [Webinar here](#).

SEMI Taiwan Smart Manufacturing Chapter

The full Taiwan Smart Manufacturing Committee will meet on April 21, 2021 to discuss objectives and report on planning for Smart Manufacturing Taiwan and other Chapter priorities.

The Committee will also review the outcomes from the March 26, Fab Equipment Information Security SEMI Standards Task Force meeting. Committee Meeting.

SEMI South East Asia Smart Manufacturing Chapter

The next Smart Manufacturing Chapter meeting is being held on March 30. The meeting will focus on SEMI Standards that impact Connecting, Sensing and Predicting, particularly in the SMTP and PCBA portions of electronics manufacturing.

The meeting will also highlight updates on IBM's [5G Industry 4.0 Studio](#) and HP Singapore's move to join the World Economic Forum's Global Lighthouse Network.

Questions? Contact the [SEMI Smart Manufacturing Chapter Staff](#). Stay updated with the industry and [subscribe to SEMI newsletters](#).

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