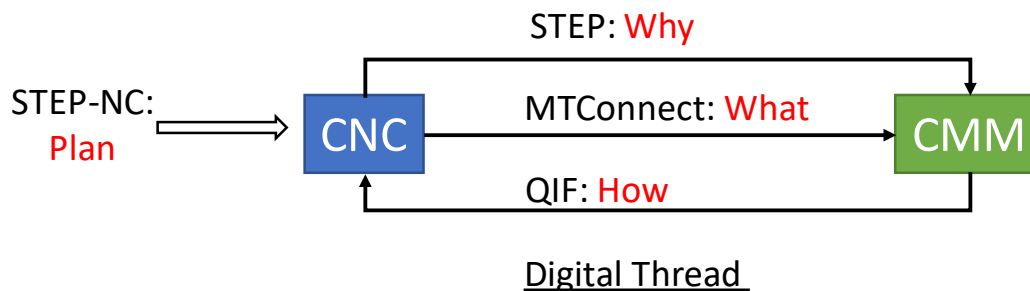# Build Anywhere Challenge
at IMTS 2018

In order to demonstrate that the digital thread enables "build anywhere", we are asking IMTS vendors to participate in the following challenges.

1. **Measure Anywhere**: add dimensions and tolerances to a part you are already planning to machine so that we can validate it is meeting its tolerances using a CMM.
2. **Machine Anywhere**: machine a part to be supplied by us so that we can validate it is meeting its tolerances using a touch probe.
3. **Manufacture Anywhere**: machine a test part that will be released on the day of the challenge so that we can validate it is meeting its tolerances using a digital twin.

Digital Thread

In each challenge, we will make a STEP file containing design tolerances, and return a QIF file describing how well the part has met those tolerances.

For the first challenge, you can connect your CNC to a CMM using sneaker net. For the second challenge, your CNC will need a touch probe that can be connected to a CMM server using MTConnect. For the third challenge, your CNC will be connected to a digital twin server using a high speed MTConnect.

For the first challenge, you can use any machining solution. For the second challenge, we will provide optional machining solutions for different tooling configurations in a STEP-NC file. For the third challenge, we will ask you to use one of the STEP-NC machining solutions we release on the day of the show.

Schedule (July 2017 to November 2018)

- Month 1 - endorsement of standards groups

- Month 2 – endorsement of challenge sponsors

- Month 3, 4, 5 – presentations to interested parties

- Months 6 to 12 – rehearsals at test sites

- Month 14 & 16 – IMTS and JIMTOF