Breakout Session 4: Process and Equipment Needs Transitioning Plate-to-Plate to Continuous R2R Additive Process Technologies

VISION AND GOALS

- Cost reduction, both in the implementation of new R2R processes (that replace Plate-to-Plate) and end unit cost of the produced item
- Development of new material (new properties, low cost, etc) to enable Plate-to-Plate to R2R transition for different process conditions (low & high temperature, high speed, etc)
- Ability to prototype new R2R processes to enable easier, lower cost transition from Plate-to-Plate to R2R

CHALLENGES

- R2R Process
  - Lack of process parameter understanding as one transitions from Plate-to-Plate to R2R
  - Understanding the interface physics & chemistry of R2R
- Tech Transfer
  - Lack of simple/small scale R2R process development that enable scale-up
  - Time to adopt new materials
  - Cost effectiveness of transitioning from Plate-to-Plate to R2R

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R&D FOCUS

- R2R Process
  - Access to infrastructure, equipment, and expertise
  - Capability to scale material from gram to kilo—gram to enable process modeling and evaluation
- Tech Transfer
  - Predictive design of R2R products
  - Faster transfer from P2P and scale-up to R2R
  - Develop new products enabled by the characteristics inherent in R2R processing