

OVERCOMING CELL THERAPY MANUFACTURING CHALLENGES

WITH CLOSED, MODULAR AND
AUTOMATED SOLUTIONS

**Top manufacturing challenges and solutions across the
autologous T-cell therapy workflow**

Challenges



Leukapheresis



T-cell
isolation



T-cell activation +
enrichment



Expansion



Harvest +
QC



Delivery



The typical workflow is a very complex and labor-intensive process with multiple stages where contamination and errors can greatly affect the desired outcome.

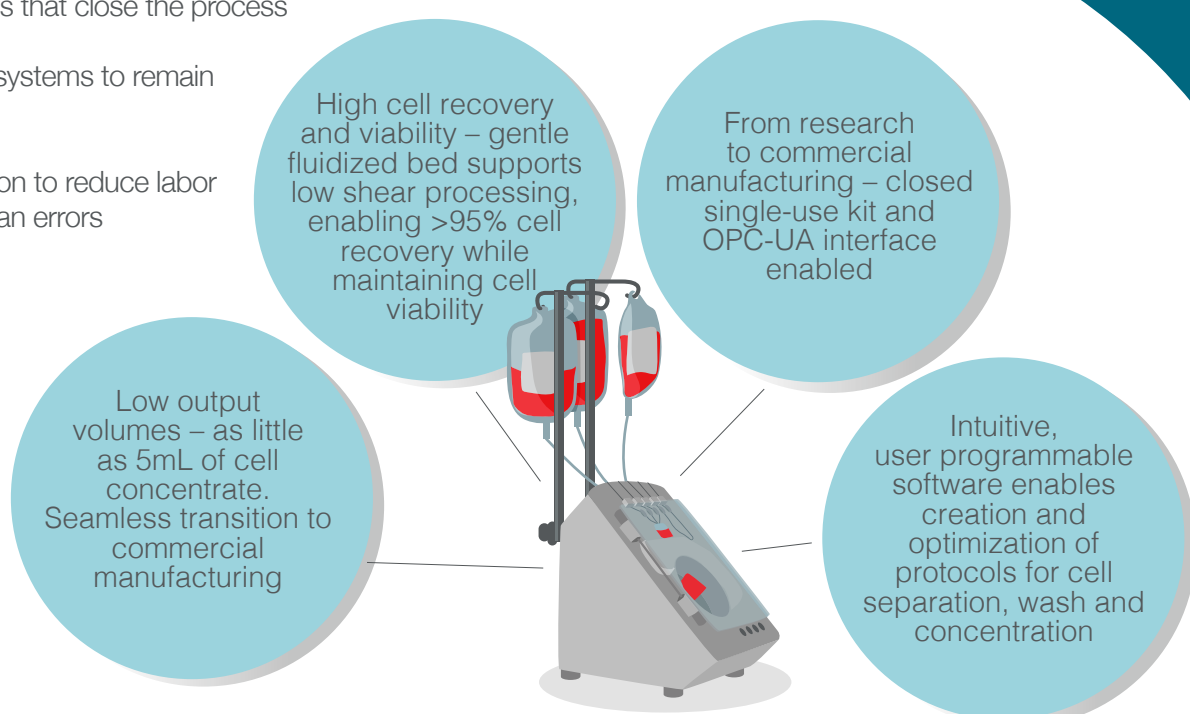
- 1 Several open processes where contamination can occur
- 2 Process complexity utilizes a multitude of products
- 3 Labor-intensive multi-step process increases error potential
- 4 Instruments lack flexibility to facilitate different process steps
- 5 Lack of in-line monitoring throughout workflow
- 6 QC (release testing) is time consuming and expensive: >30% of total cost
- 7 Zero failure tolerance

Solutions

Solutions to mitigate the complexities of T cell therapy manufacturing

Considerations as you scale your manufacturing process for commercial settings:

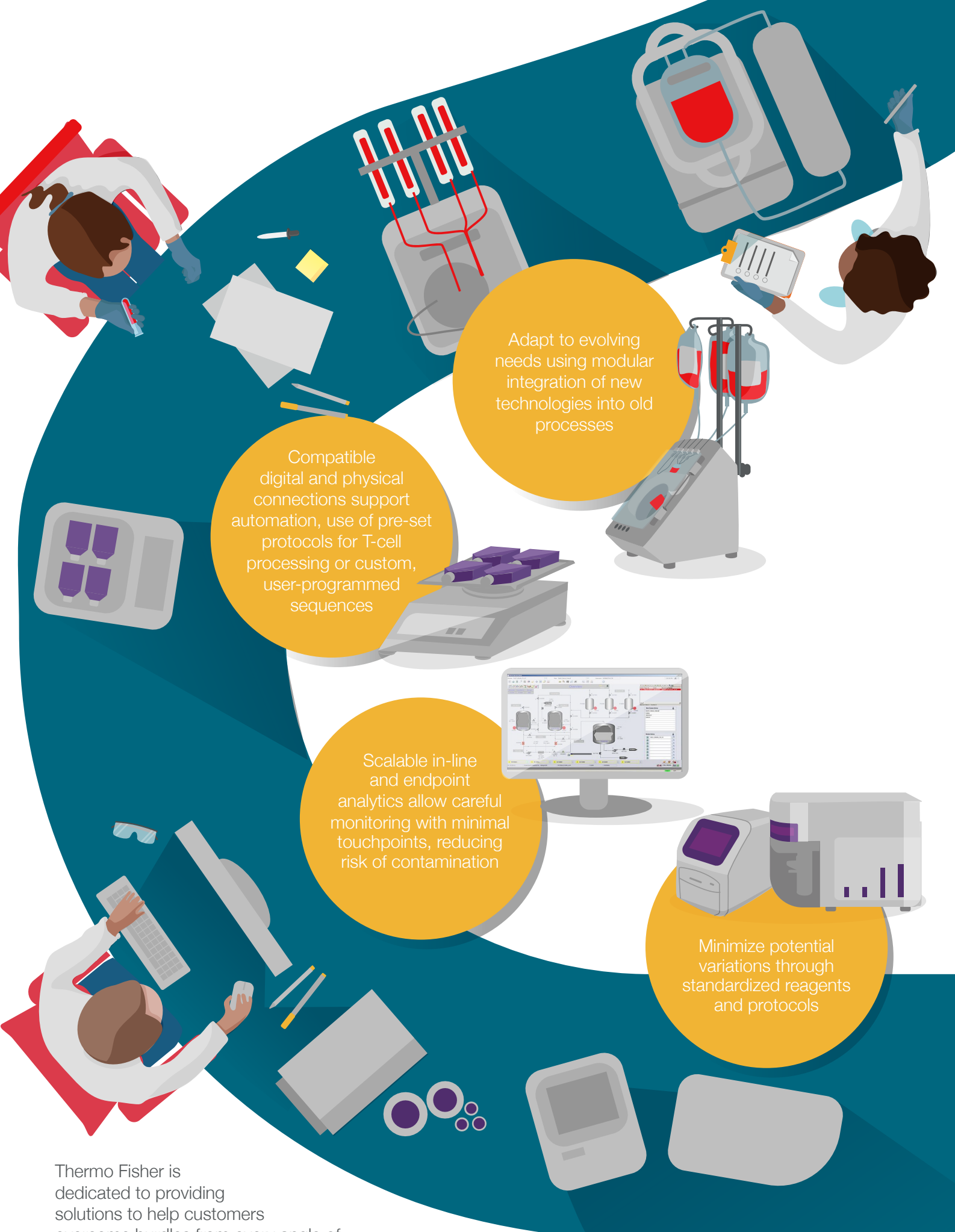
- Workflows that close the process
- Modular systems to remain flexible
- Automation to reduce labor and human errors



Putting solutions into practice:

evolve your process from research to commercial scale

Prioritize process improvement without sacrificing time-to-market by utilizing closed, modular and automated systems



Thermo Fisher is dedicated to providing solutions to help customers overcome hurdles from every angle of their cell therapy production processes. Visit thermofisher.com/CGT to learn more.

This infographic was created as part of the RegMedNet In Focus on decentralized manufacturing in association with Thermo Fisher Scientific.