FASTFACTS

Cell & Gene therapy supply chain orchestration explained

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Manufacturing and supply processes for cell and gene therapies (CGT) require sensitive handling not only for transportation, storage, and manual processes but also for patient data. The implementation of a Cell & Gene Orchestration Platform (CGOP) is an industry-proven way to optimize personalized medicine supply chains. CGOPs provide the required level of cross-organizational orchestration, automation, and optimization which, at scale, cannot be achieved manually.

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End-to-end (or entire) coordination of supply chain management for personalized therapies is complex and presents many challenges.

Hypertrust believe that key processes and activities can be segmented on different levels, as detailed in Figure 1.

CGOPs must comprise key features supporting activities at each of these levels in order to fully leverage their potential to automate, optimize, and standardize end-to-end therapy processes.

The orchestration platform architecture at HPDC is based fully on the model shown here, whilst still being modular enough to cover the needs of both early clinical and late commercial stage therapies.

The Hypertrust X-Chain platform has been applied to CGTs and consists of several levels to offer valuable features to support each patient journey, as illustrated by Figure 2.

The therapy control tower and supply chain dashboards give full transparency and insight across all current and past therapies into the pharma company's supply chain responsible roles. Furthermore, compliant labeling of kits, samples, final products, and other items (including ISBT128-compliant blood bag labels) are included and available to the healthcare professional, material supplier, and manufacturing operator roles.

The workflow engine can be equipped with an unlimited number of supply chain and manufacturing protocols to execute every possible therapy type. Additionally, the protocol configuration can be conducted by a power user, since no programming is involved.

Last but not least, X-Chain maintains, documents, and protects both the chain of identity and the chain of custody, meeting all requirements in the cell and gene therapy orchestration environment.

Figure 1. The Hypertrust cell and gene therapy orchestration platform.

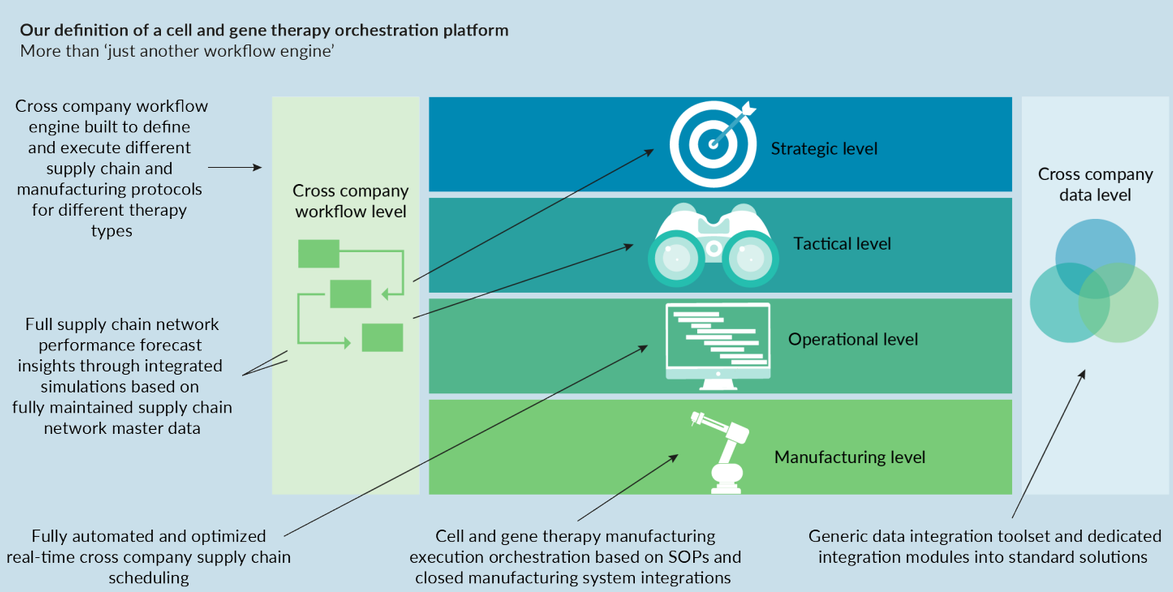

Figure 2. Hypertrust X-Chain key features for CGT therapies.