



OPEN
X-CELLerator
COMMUNITY



DRIVING SUPPLY CHAINS FOR CELL & GENE THERAPIES

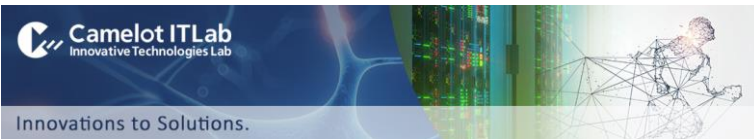


DISTRIBUTED SCHEDULING IN CELL & GENE THERAPY ORCHESTRATION

ANDREAS GOEBEL
Managing Director

hypertrust 
PATIENT DATA CARE

Hypertrust Patient Data Care is a CAMELOT Group spin-off providing unique solutions for pharma supply chain optimization and to secure the handling of patient related data



- ▶ Founded in 1996 - Germany & US
- ▶ Technology partnerships with software providers such as SAP
- ▶ Our incubator for new business applications development



- ▶ Founded in 1996 – Germany & US
- ▶ Globally leading consulting specialist for value chain management
- ▶ Delivering innovative concepts and solutions along strategy, organization and processes focusing on Pharma

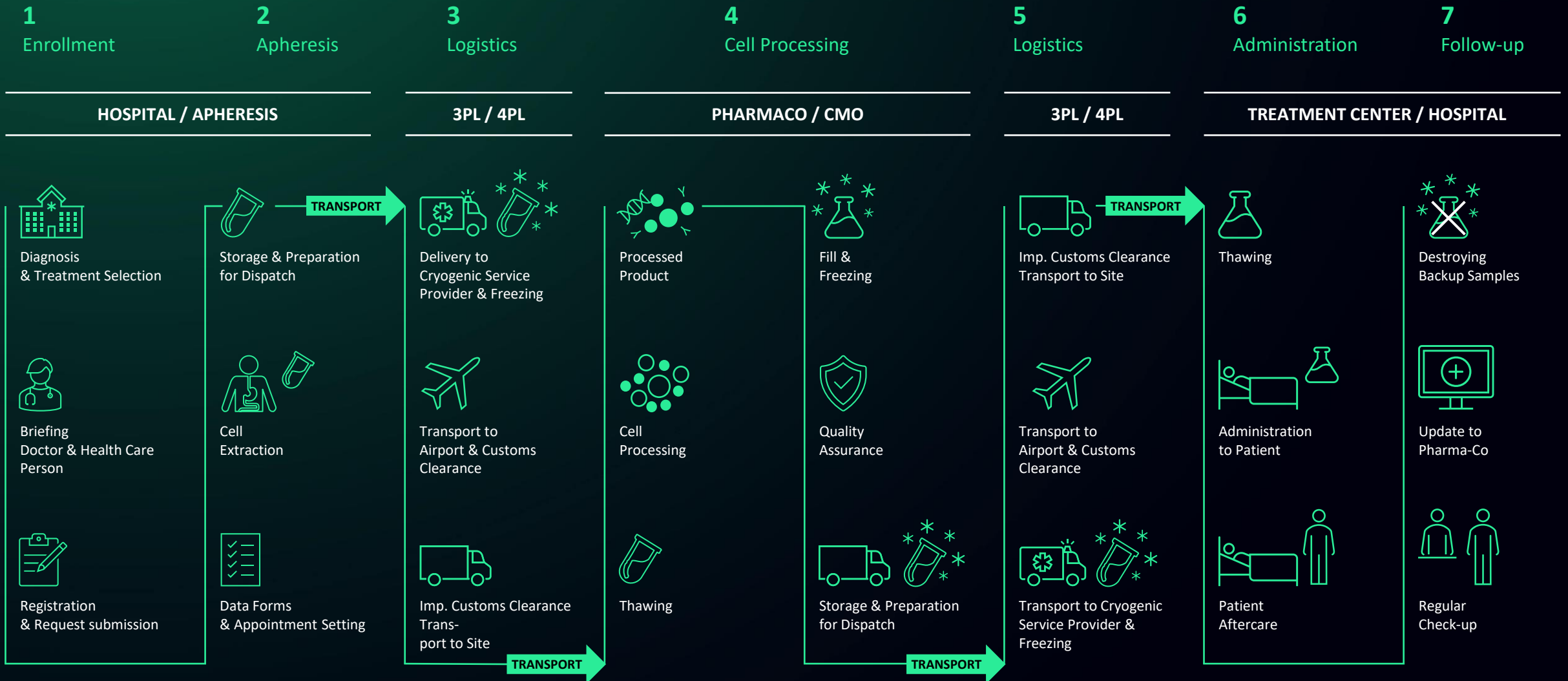


- ▶ Founded in 2018 in Germany
- ▶ Focused on Pharma, Biotech, and Healthcare
- ▶ Combining digitalization excellence with specialized domain knowledge

Co-Innovation and Co-Development with customers and partners



PERSONALIZED CELL & GENE THERAPIES



at the example of autologous CAR-T therapies

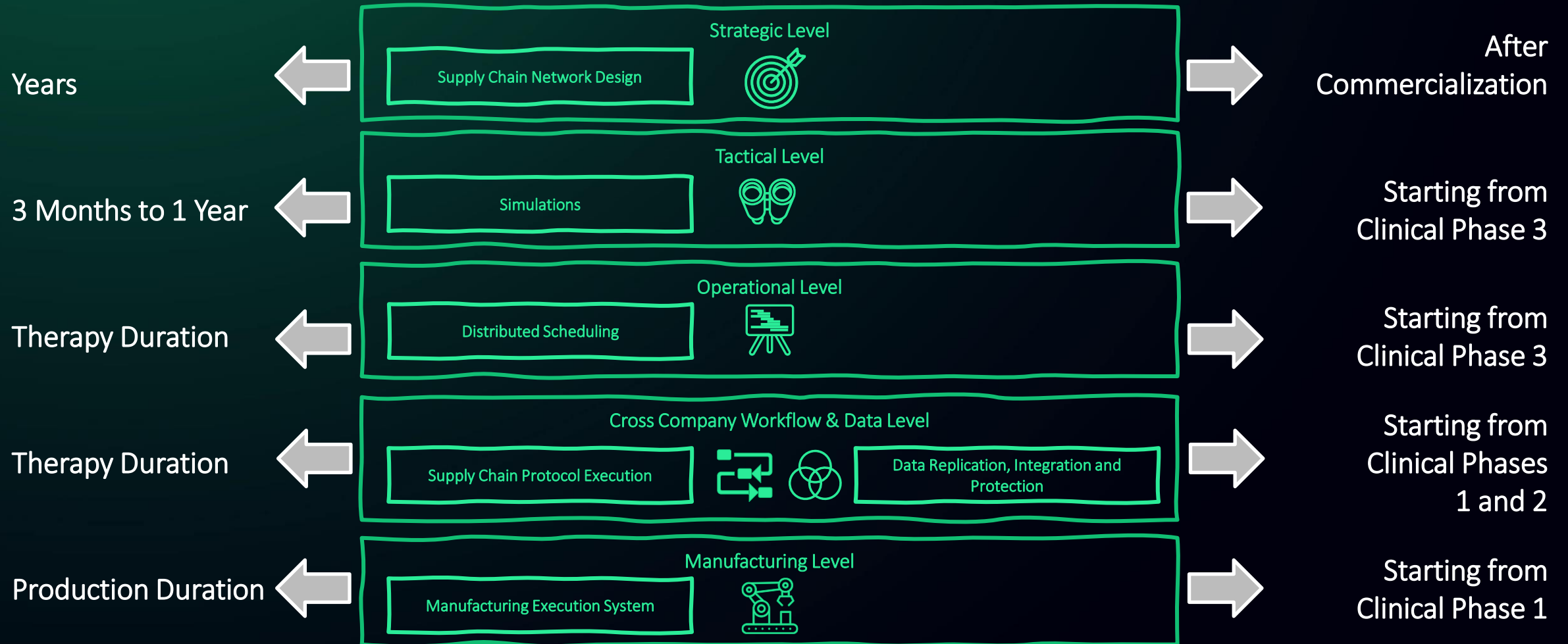
OUR DEFINITION OF CELL AND GENE THERAPY ORCHESTRATION (C>O)

MORE THAN “JUST ANOTHER WORKFLOW”

Planning / Execution Horizon

C>O Levels

Relevant Asset State



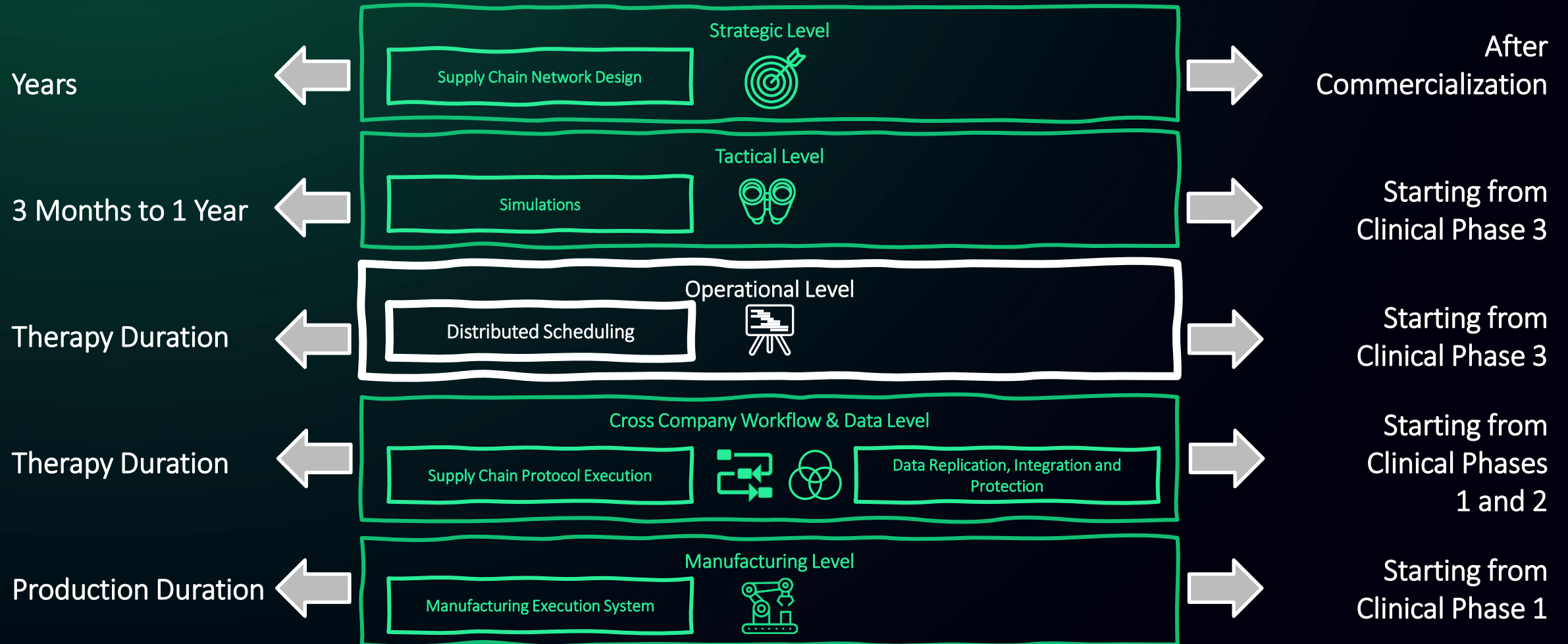
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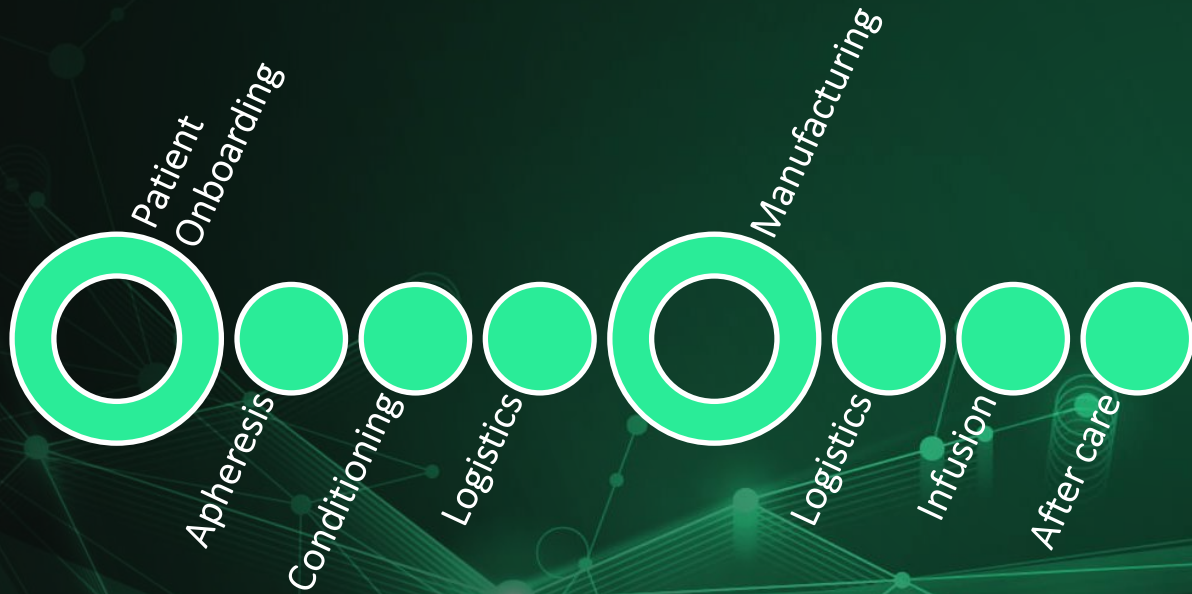
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DISTRIBUTED SCHEDULING

A MATTER OF COLLABORATION AND STANDARDIZATION



Clinical Schedules:

Apheresis, Conditioning, Infusion and After Care Schedules in many different clinical systems and formats

Shipment Bookings:

Logistics

Many different LSPs offer different booking methods based on different data models

Production Slots:

Manufacturing

Controlled by the pharma company but more complex when utilizing CMOs

DISTRIBUTED SCHEDULING

A MATTER OF COLLABORATION AND STANDARDIZATION

Required Harmonization and Standardization of:

- Data Models
- Protocols
- Interfaces
- Secure and Privacy Preserving Data Exchange

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DISTRIBUTED SCHEDULING ON THE DIFFERENT C>O LEVELS

Strategic & Tactical

Support through simulations,
analytics and reporting



What-If Analysis

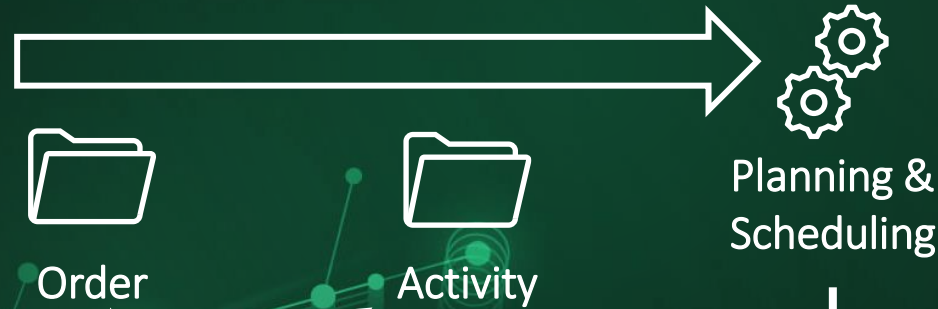


Operational Reporting



Operational

Distributed In-Memory data
model allowing for real-time
planning and (re-)scheduling
realizing feedback loops of self-
driving supply chains



Cross Company Workflow

A distributed workflow engine
containing all required components
for real-time execution





**LET'S MAKE ADVANCED
AND PERSONALIZED
THERAPIES RUN.
TOGETHER!**

THANK YOU FOR YOUR ATTENTION

ANDREAS GOEBEL

Managing Director

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