ADEXA Predict, not just response

SAREPTA

Case Study

Overcoming the challenges and intricate requirements of pharmaceutical supply chains

Key goals include:

- Streamline a currently manual planning process
- Systemize key planning logic for long term persistence and backup
- Minimize data collection and manual transformation to allow key users to focus on plan analysis and what if

SCP Modeling will cover two key process flows

- **RNA–** Note the rest of the design is focused primarily in this area
- **Gene Therapy–** Note at the time of creation of this document, Gene Therapy has not been discussed in as much detail as RNA nor has there been enough data collected to create include in the prototype.

RNA Process Flow

- **The Supply Chain Planning (SCP)** will cover the following process flow
- **Raw Materials** including Alcohols (grams)
- **Subunits** (grams)
- **API / DS** (Drug Substitute) (grams) –Key area where detailed capacity will be modeled
- **DP** (Drug Product) (convert from grams to vials)
- **Finished Good** (vials)

Raw Mtls (g) > Subunits (g) > API / DS (g) > DP (vials) > FG (vials)

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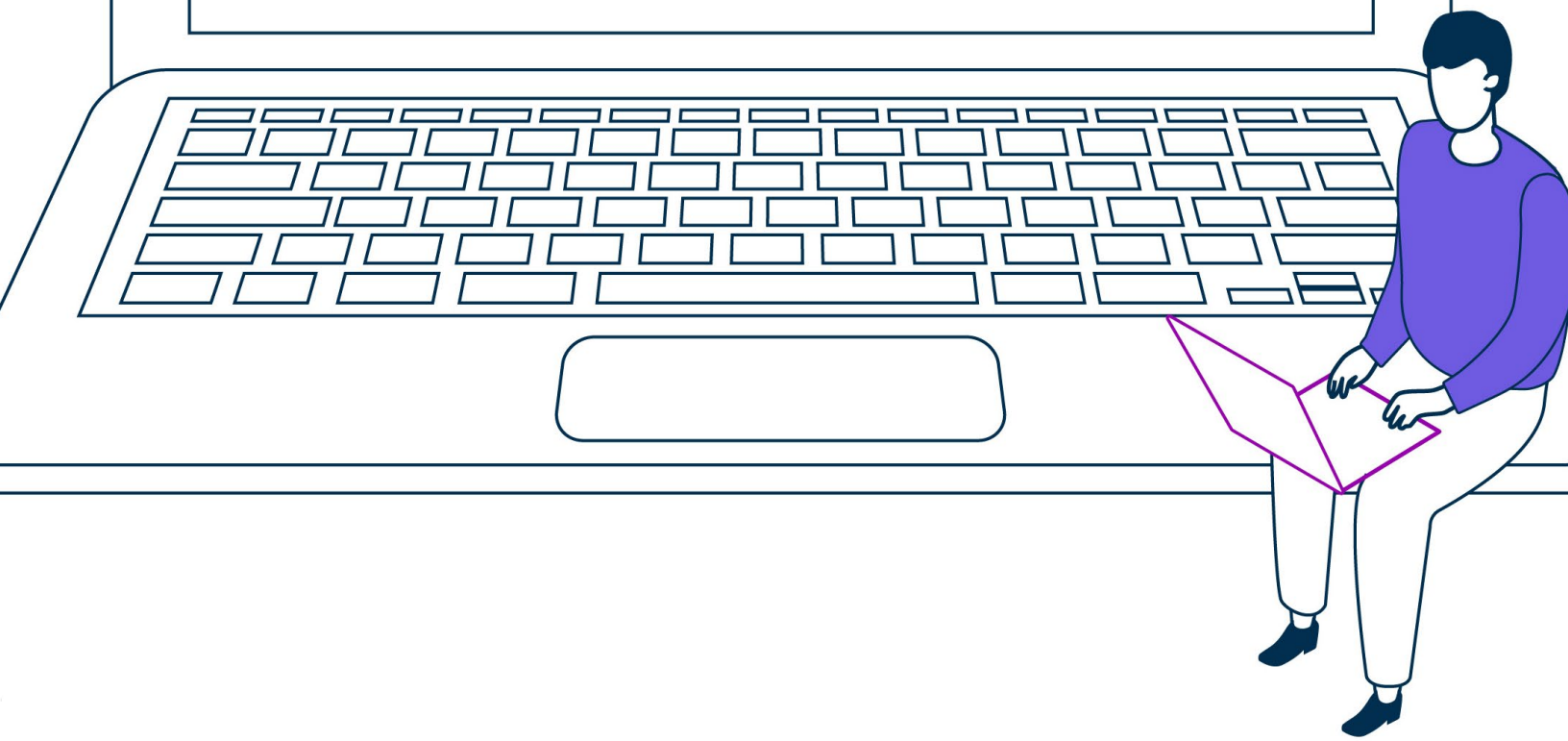
Key Functions Provided

- 6-8 year planning horizon where the typical supply chain spans 1-2 years
- Detailed (white box) scheduling of reactors for drug product with contract manufacturing (gray box) for subunits, drug substance, and packaging
- For detailed scheduling and pseudo sequence include large setups (weeks) are involved
- Lot / vial tracking
- Contract manufacturing makes use of sourcing constraints
- Aggregate safety stock modeled (one periods of cover for a part across multiple regions)
- Region restriction including varying region expiration (some vials “proven” for certain regions but restricted for others)
- Receiving dock (min / max) time for customs modeling
- Quarantine (min / max) time for time after manufacturing to “test” part
- Batch size modeling
- Manufacturing / expiry date tracking insuring “expired” parts are not used to satisfy a demand



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