Pfizer Non-human primate (NHP) Supply Chain Optimization (Discovery)

- Managed development of a technology solution that predicted NHP demand and facility constraining resources based on a current and 5 year forecasted drug portfolio across all internal vivariums.
- ☑ Validated projections to actual requirements to ensure methodology.
- ☑ Optimized NHP shipments from a current holding facility.
- ☑ Coordinated production data reports to assist in the procurement and transfer of study ready animals at optimal time points.

Outcomes:

- ☑ Reduced animals required a significant industry achievement.
- ☑ Facilitated portfolio risk by providing early alerts to supply shortages.
- $\ensuremath{\square}$ Minimized distributor residence time whereby reducing per diems.
- ☑ Ensured early indicators confirming adequate inventory range.
- ☑ Tested leaderships pros and cons of new supplier & distributor relationships.

Pfizer Genetically Engineered Modified Mice (GeMM) Colony Optimization (Discovery)

- ☑ Codify breeding line combinations to generate breeding pair offspring for >200 lines.
- ☑ Predicted caging requirements.
- ☑ Predicted husbandry requirements.
- ☑ Provided projected costs of an outsourced line portfolio over one to three years.
- ☑ Developed capability to swap lines bidirectionally, internal to external, generating budget impact and FTE requirements.
- ☑ Provided leadership with scenario capabilty to address portfolio changes from corporate mergers.

Ethicon Endo Packaging Plant Staff & Machine Capacity Planning

☑ Developed a simulation capability to help balance packaging batch workloads (of surgical staplers) across 20 machines, 3 shifts, and 100+FTEs.

Outcomes:

- \square Augmented a reduction in 3rd shift staff with higher volumes run in shifts 1 & 2.
- ☑ Proposed other shift changes to provide a net reduction in overtime expenditure.
- Running larger batches across all shifts would increase throughput and reduce overtime hours.
- ☑ Solution tested performed work at other facilities to reduce overtime chargebacks.

Biogen Avonex Pen – Belgian Manufacturing Facility Modeling & Simulation

- ☑ Developed of calibrated dynamic models to be used for short and long-term label & pack operations optimization and scenario planning.
- $\ensuremath{\square}$ Identified business process improvements and key cost reduction projects.
- ☑ Proactive identification of infrastructure /equipment /tech needs
- ☑ Predict current & future capacity against demand
- ☑ Provide solution to test production scenarios
- ☑ Identify bottleneck areas (Specifically cold room capacity)
- ☑ Identify maximum process & equipment capacity
- ☑ Determine future resource requirements by skill set