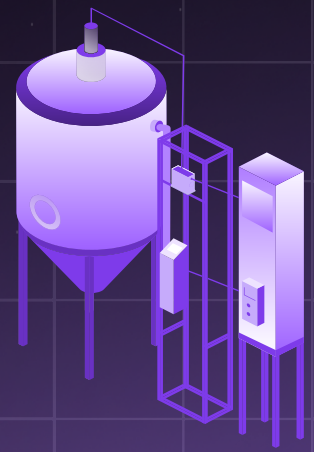






Basetwo for Improved Quality in OSD Drug Manufacturing



The challenges pharmaceutical manufacturers face with Oral Solid Dose (OSD) drug production:

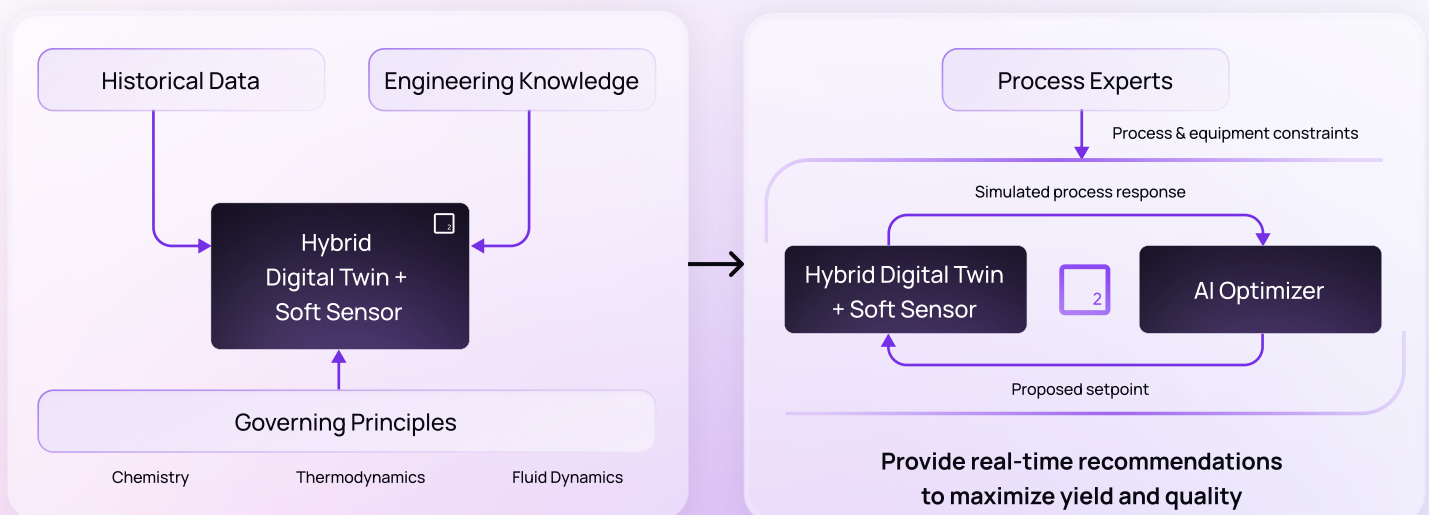
Each stage of OSD manufacturing, from granulation to coating, demands precise control and optimization to ensure consistent product quality. However, manufacturers encounter several challenges that can disrupt their quality goals:

-  Ensuring consistent quality across products remains difficult due to variability in raw materials
-  Most manufacturing tools are descriptive, showing performance rather than guiding improvement.
-  OSD drug manufacturing requires adherence to stringent cGMP standards.
-  OSD manufacturers may struggle with data silos that hinder comprehensive analysis and decision-making.

Basetwo's real-time recommendations for enhanced product quality:

Understand the relationship of live data and offline tests using a hybrid modeling approach for the soft sensor





Combine a model soft sensor with an optimizer to provide dynamic process improvement recommendations



An Example in Real-Time

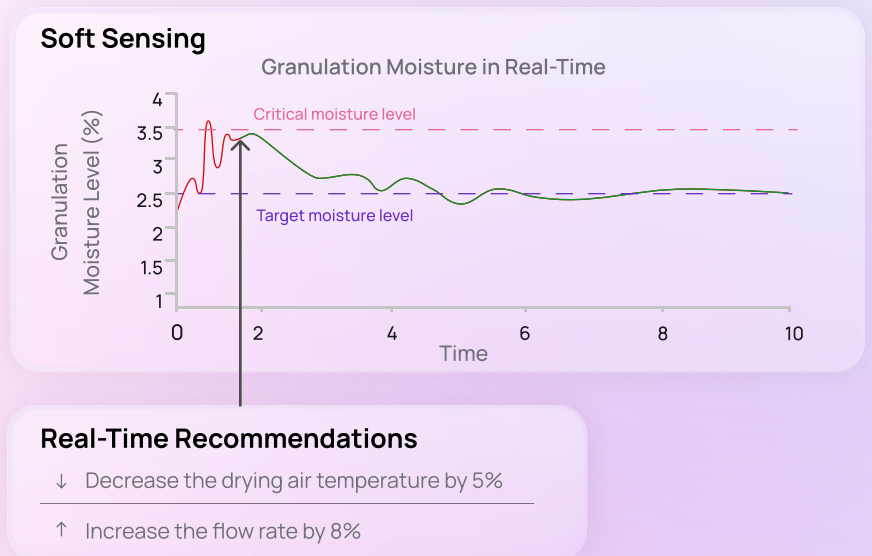
A pharmaceutical manufacturer is producing an extended-release OSD drug when an unexpected variation in granulation moisture levels is detected—rising from the target 2.5% to 4%.

1 Integrated product & equipment specifications alongside real-time data

 Target Specs Target properties; optimal granulation	 Process Documentation Current operational parameters	 Process Data Temperature, humidity, blend uniformity, etc.	 Raw Material & Quality Data Moisture content, historical deviations.
--	--	--	--

2 The monitoring of physical processes in a virtual environment




The hybrid soft sensing model predicts that if the current drying conditions continue, tablets will fail dissolution testing due to inconsistent drug release profiles.



3 Optimization and Action

The AI model recommends adjusts to the drying air temperature and flow rate to bring moisture levels back within specification without over-drying. It also recommends adjusting the binder concentration in future batches to mitigate the risk of excessive moisture retention.

4 The result of real-time process optimization:

 Maintained batch quality , ensuring tablets meet dissolution and potency specifications.	 Enhanced process efficiency, cutting drying time by 12% and lowering energy consumption.	 Reduced rework and batch rejection rates saving \$500k annually
---	--	---

Proud to be working with 4 out of the top 10 Pharmaceutical manufacturers

Reach out today!

✉ contact@basetwo.ai