# FREEDOM SPACE 3.0

# Freedom to explore.

#### 5 Billion Molecules

Synthesis on demand, 5-6 weeks. Fixed price

### **ML-Assisted Space Generation**

Reagent statistics from Enamine

ML-assisted classification of reagents

Application of ML models to in-stock reagents (Enamine, AABlocks, Chemscene, etc.)

Enumeration using eight validated procedures

Freedom

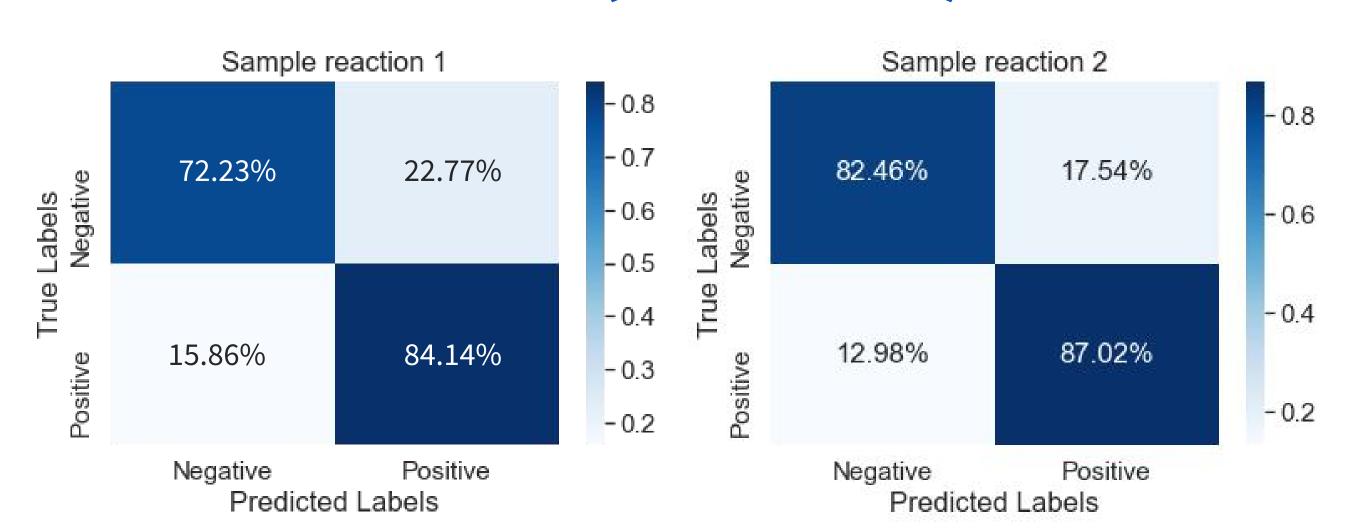
Space 3.0

#### Application of ML models to selection of reagents:

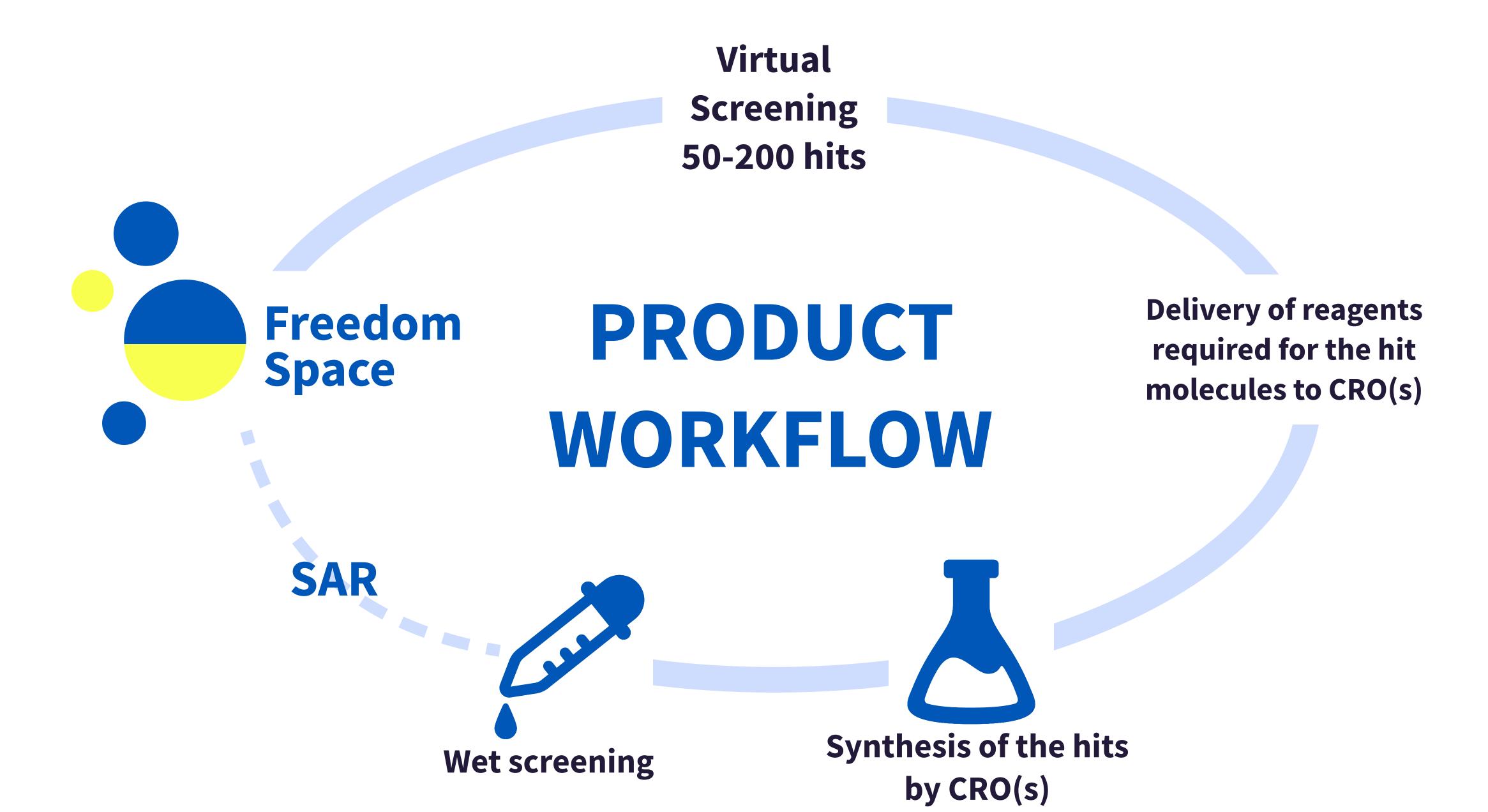
Goal is to generate molecules with high synthetic feasibility by filtering out potentially "bad" reagents

- ML-based classifiers trained on reagent statistics from Enamine
- Neural Network architecture
- Up to 83% recall of the "bad" reagents
- 90%+ "good" reagents after filtering

# Sample results - performance on the test set (unseen data)



## Validated Reactions Space:



#### Advantages:

- Hit discovery in 10 weeks;
- Well-established workflow with assistance at all stages;
- Unique chemical space, little overlap with other commercial spaces;
- High synthesis success rate, competitive pricing;
- Analogs and custom chemical spaces around hit molecules.