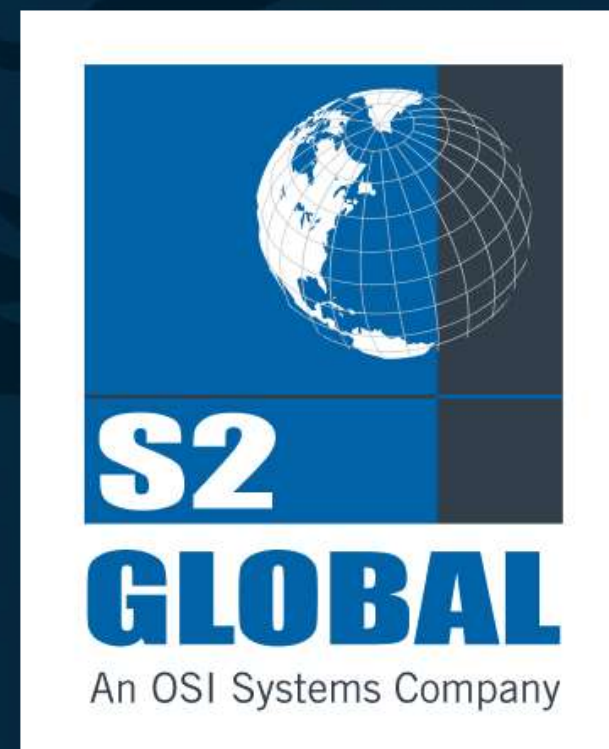


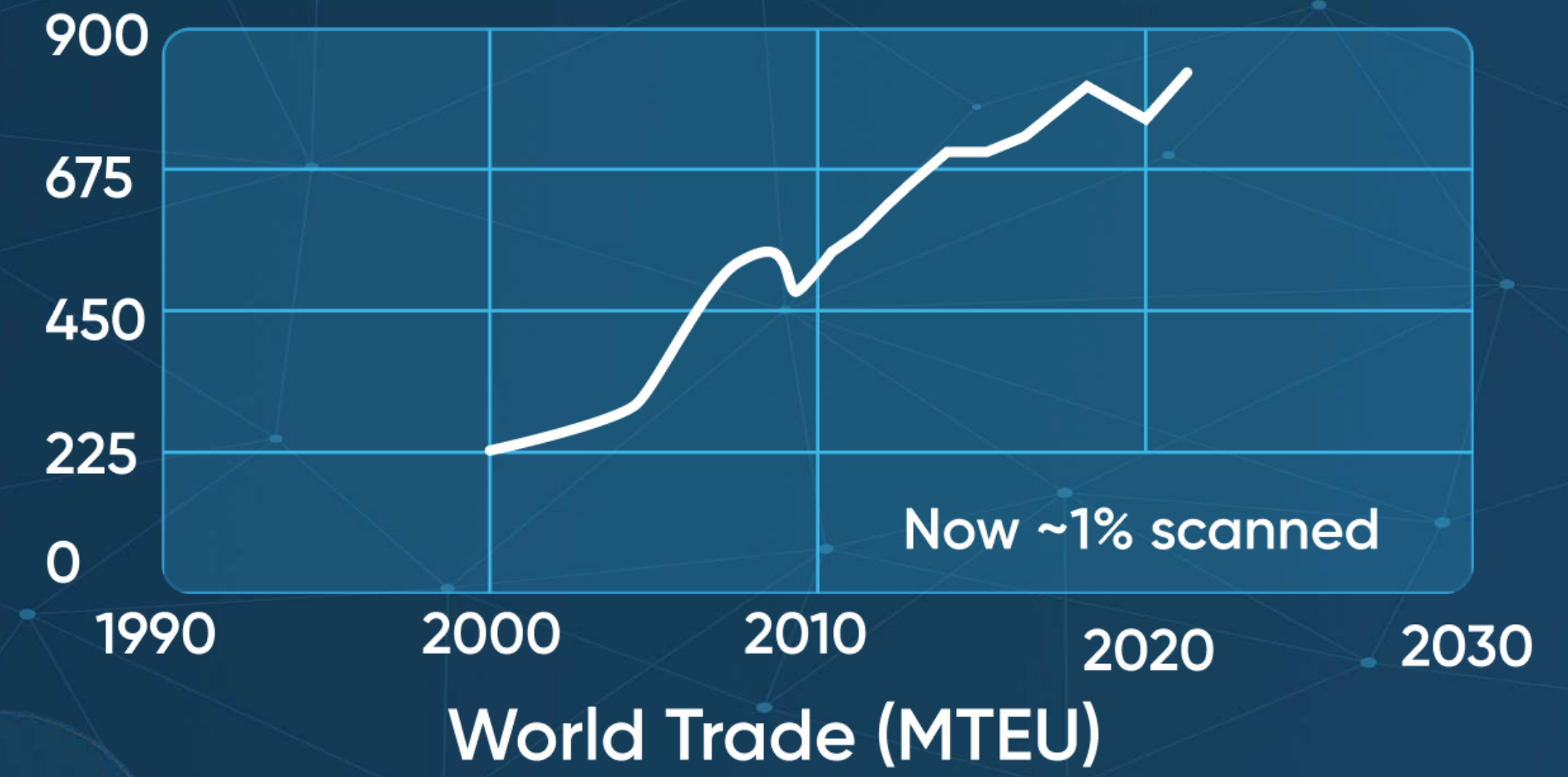
Toward 100% Customs Inspection Through AI

Session 3. Empowering Customs Through Artificial Intelligence

Harnessing Big Data to Enhance Risk Management
and Trade Facilitation



100% Customs Inspections



100%
Inspection

CONOPs

NII
Technology

Algorithms



Operation



Algorithms



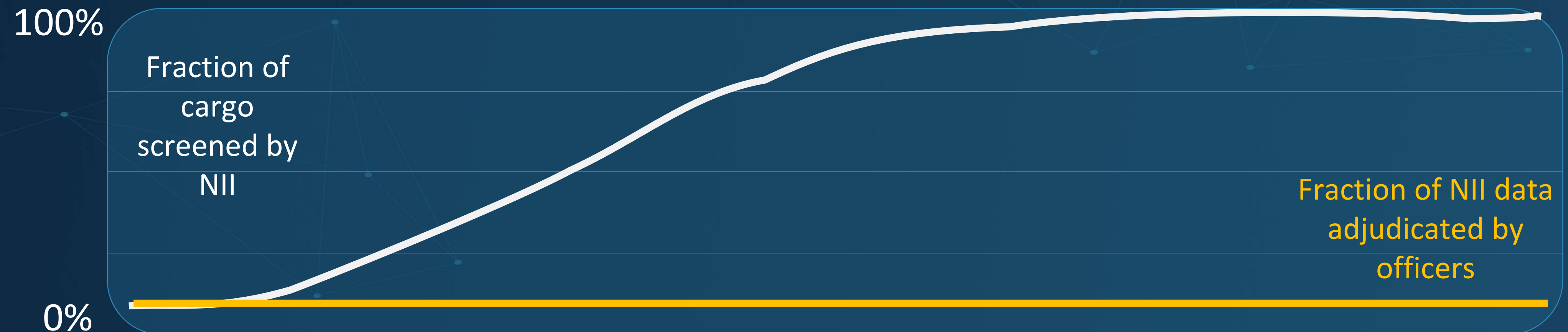
Equipment

Algorithm Roadmap

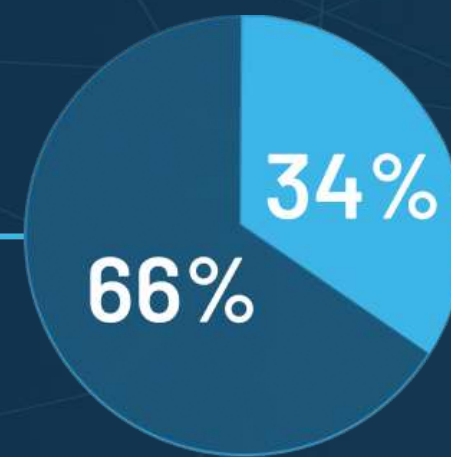


Goals:

- Algorithms assist operators
- Integration of AI tools
- Creation of AI datasets
- Pilot deployments
- Replace/assist operators
- Exceed operator performance
- Address site-specific problems
- Beyond single scan analysis
- Scan and non-scan data
- Self-learning



Screening Accuracy: AI v. Humans in High Throughput Inspection



Cargo declared as bananas

Image Matched

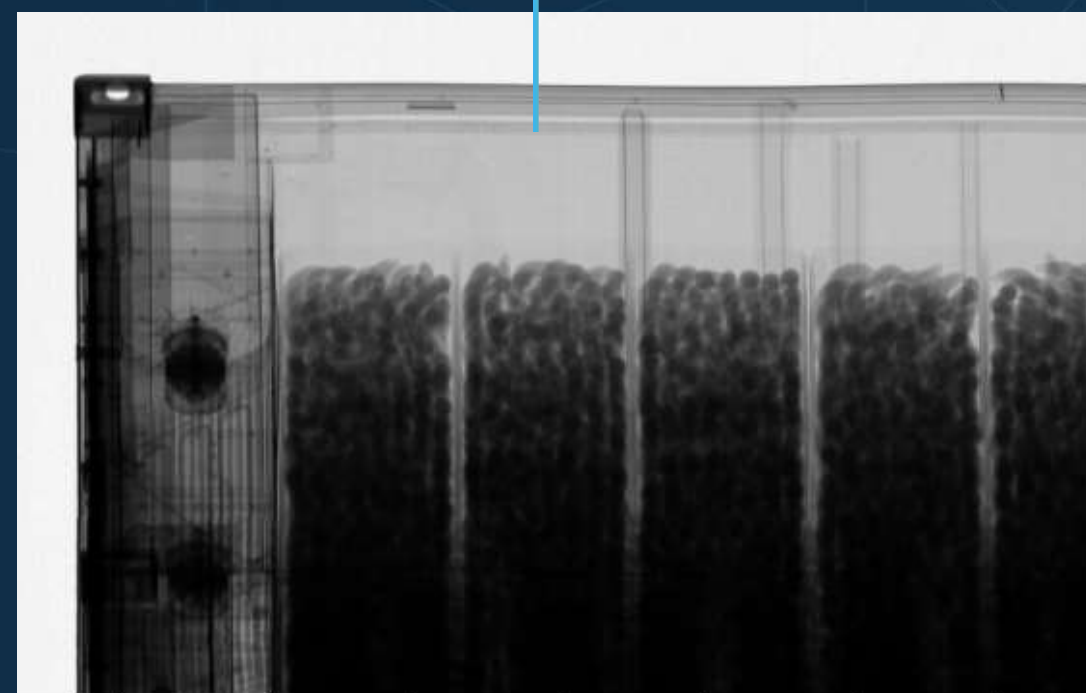
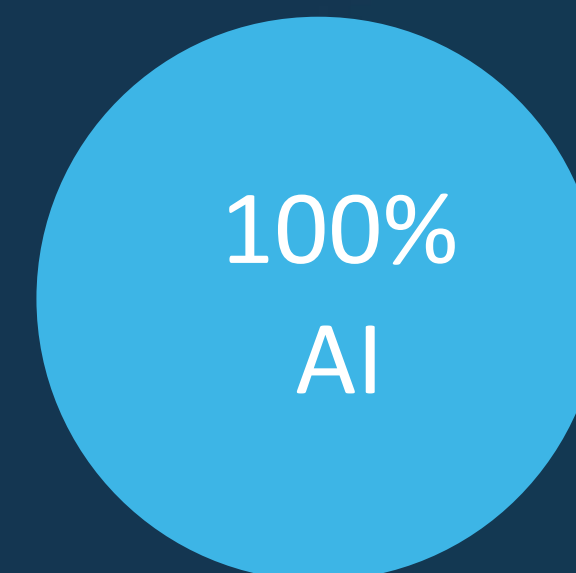
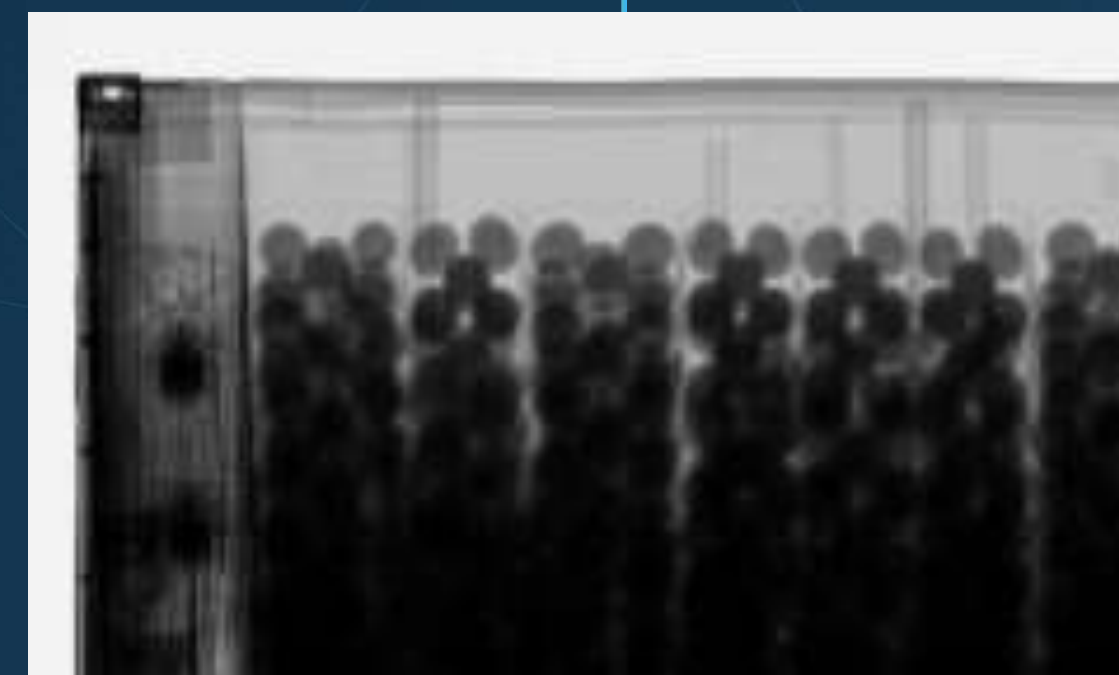
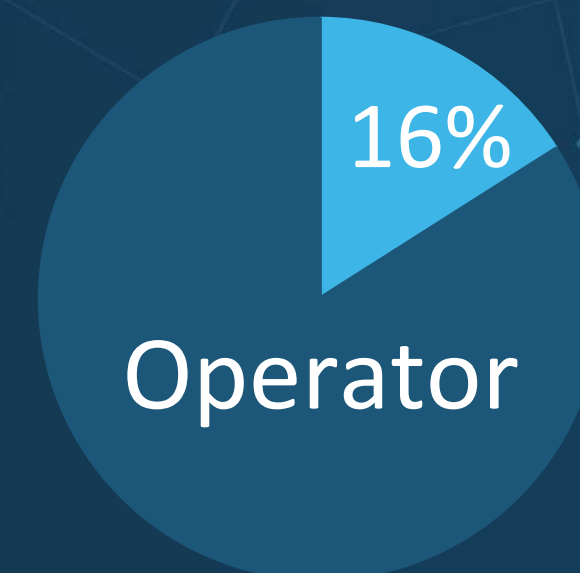


Image Mismatched



AI is ready
to help!



Low operator
Vigilance!

The lack of historic inspection data is the most significant obstacle to developing algorithms for automated security inspection

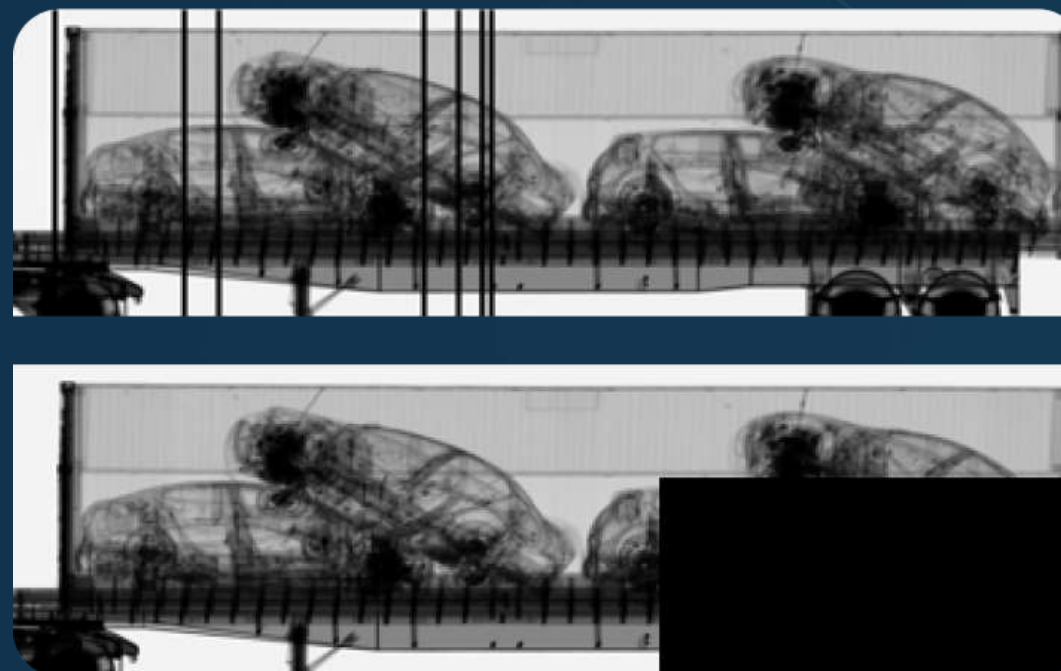
How to safely share sensitive labeled datasets?



Data Service Tool for Developers

Data quality can significantly impact algorithm results

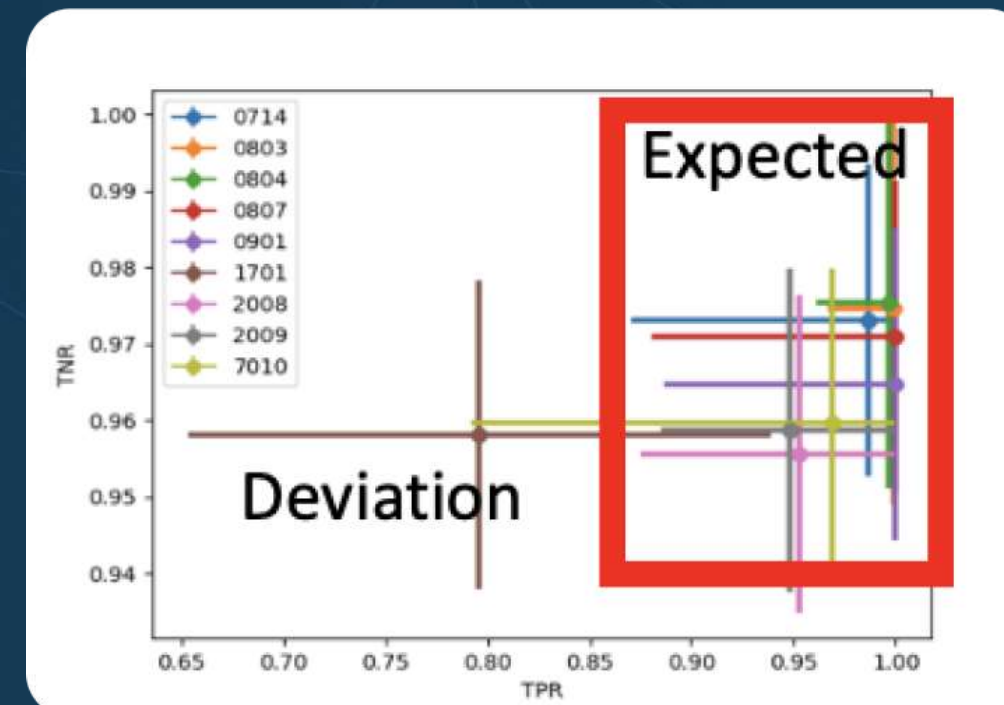
How to detect data quality degradation?



Data Quality Monitoring

Algorithms will take over more inspections

How to detect problems in algorithm performance?



Algorithm Quality Monitoring

Thank You

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