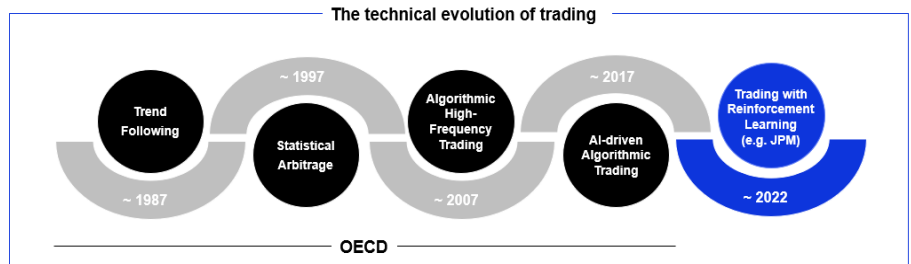# lpa_ Consulting

Trading Execution with Artificial Intelligence: The next generation of order placement and routing

The introduction of quantitative models and machine learning algorithms in trading execution can substantially enhance profits and reduce risks. This new approach to order placement and routing benefits from the latest developments in Reinforcement Learning in order to appropriately benchmark trading performance and advice traders and portfolio managers.

- Trading is a fast-paced field, where **technological innovation** is essential to drive profits and remain competitive.

- **Advanced Analytics and AI** methodologies can complement intuitive trading and substantially benefit order execution.
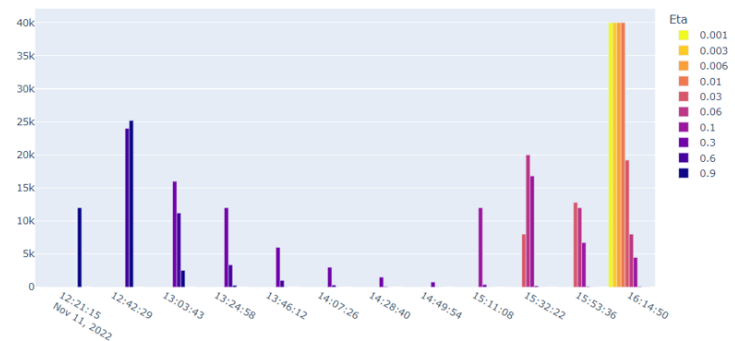

The technical evolution of trading

Trend Following ~ 1987 · Statistical Arbitrage ~ 1997 · Algorithmic High-Frequency Trading ~ 2007 · AI-driven Algorithmic Trading ~ 2017 · Trading with Reinforcement Learning (e.g. JPM) ~ 2022

OECD

With our new technology and methodology, traders can assess *optimal venues and brokers for routing*, *limit order prices*, *placement times*, *order book liquidity*, and *trading algorithms* for minimization of market impact and timing risk.
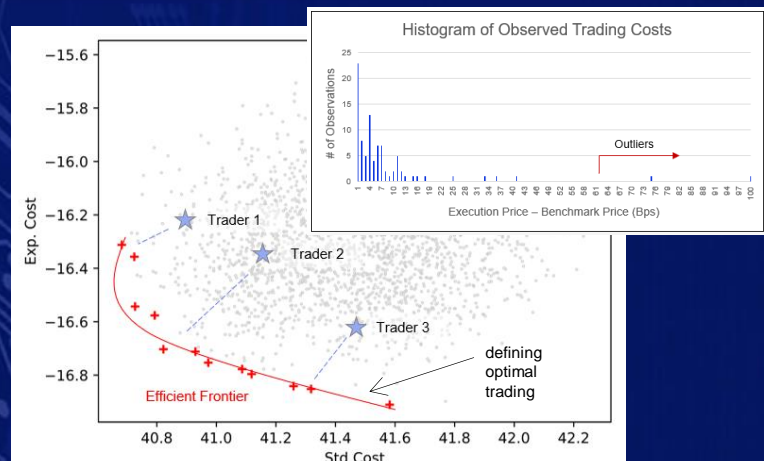
LPA's solution to industry challenges

- ➢ **Transaction costs and operational risk** from executing large orders can be reduced by pre-trade AI algorithms that are adaptive to changing market conditions.

- ➢ **Trader and broker performance** can be quantitatively measured with appropriate benchmarks, and TCA reports with less false outliers can be automatically produced for **Best Execution**.

- ➢ Smart order routing can be improved with **LPA's algo wheel**.

Optimal execution path for different investor's risk aversion

🏅 Benefits

① User interface for order monitoring and execution advisory (Pre-Trade)

② Automated performance reports (Post-Trade)

③ Machine learning algorithms for pricing, placements, and routing.

④ Savings of 6 to 10 bps per order for relatively large orders.

⑤ Automated execution of small orders to best venues and brokers.

⑥ Dynamical price and liquidity discovery with Reinforcement Learning

lpa_ Consulting

Trading Execution with Artificial Intelligence: The next generation of order placement and routing

LPA Approach

✓ Dedicated team of top subject-matter experts.

✓ Proven experience: Developed for large universal bank and cantonal bank in Switzerland, yielding an execution PnL of ~$20 million/year.

✓ Fast and accurate delivery: Automated Best Execution and Performance reports.

01. Introductory call

02. Preliminary assessment of your situation

03. Development of Proof of Concept

04. Full integration of solution inhouse

Contact

Christian Behm
Partner

✉ christian.behm@l-p-a.com

📱 +49 172 620 71 11

🏠 Lucht Probst Associates
Große Gallusstraße 9
60311 Frankfurt am Main

Contact

Sandro Schmid
Partner

✉ sandro.schmid@l-p-a.com

📱 +41 79 470 59 92

🏠 Lucht Probst Associates
Brandschenkestrasse 41
8002 Zürich

Founded in 1999 by Stefan Lucht and Roland Probst to offer solutions as the finance industry evolved, LPA was built on the needs of its clients. Today the company has over 400 employees in 12 cities worldwide, delivering cutting-edge consulting through its specialist teams, and technology through software products.

Defy the processes of the past.
Deploy innovation in a way that suits you.
Run to the forefront of global innovation.

For more information, please visit www.l-p-a.com.