# Lucido xTRMPlatform:

*Market Leading Energy Expertise Meets Multi-Tenant SaaS*

# Contents

## Designed for 21st century global commodities markets

What characterizes 21st century markets? It starts with the dichotomy of many distinct markets which have many similar characteristics. Even the distinctions have a commonality to them. All tradeable commodity markets in the world start with a need for stable processes within an organization to truly support the trading of that market. Over the past three decades we have been a part of solidifying those processes from trade execution through trade capture into daily trade management all the way through product and financial accounting to settlement and post-settlement. Within this trade lifecycle are many nuances and complexities that vary by market, company and business intent. There is also a cadence to it that makes it possible to manage it better than has ever been done before, if you truly understand it.

Welcome to a 21st century perspective from a group that has been intimately involved in the evolution of these markets, the organizations that have defined them and now, the platform that unlocks them.

### Opinionated @ Insulated Scale

This single phrase describes Lucido's approach to building a 21st century multi-tenant SaaS ETRM Platform and reflects the deep, broad energy market experience woven into its fabric. The people who make up our team have worked in some of the most successful and recognized energy trading shops around the world as clients, advisors and software providers.

### *"Opinionated"*

A defining attribute of successful enterprise-class SaaS platforms is their ability to deploy changes frequently and safely, which requires high quality, repeatable and precise testing. Safe change deployment is a key criterion for a software provider, but, to be truly successful, they must all be well understood by our customers.

An opinionated platform is what makes this possible. In SaaS software, *opinionated* means that every feature of the platform has a precisely defined set of inputs that produce equally precise outputs. This may sound like a simple concept, but it is essential to testing that each feature does precisely what is intended – nothing more and nothing less.

A classic example in ETRM is that when specifying a time, software needs to be precise to a defined level of detail (milliseconds where appropriate) while also accounting for the time zone. No assumptions should be made that the time zone is implied based on where the user is located. Similarly, when testing the results of a calculated Mark-to-Market (MtM), a currency and exact decimal precision is required as part of the test assertions.

### *"Insulated Scale"*

Modern customers demand scalability in their software, without needing to prescribe when, how, or for how long the software will be deployed. Our platform is designed to scale bi-directionally to meet demands by functional area. For example, services need to scale up during morning trading then back down later in the day, when calculation services need to kick into action.

## Designed and Architected as SaaS

From our very first conversation to build a modern ETRM Platform, SaaS has been the only technology solution we have considered. There are numerous websites and strategies dedicated to understanding and maturing through the common "cloud maturity model," starting with IaaS through PaaS to arrive at SaaS. This model is important for vendors that have legacy products that have been in the market for decades and require significant re-architecting and investment to make progress along this path. By designing, architecting and building from the ground up, we were able to start at the target state of SaaS and then require our engineers to never go backward. There are numerous benefits to this approach and end state: some of these are technical in nature, but most of them are business-aligned.

*Technical Benefits*

There are numerous technical benefits to a true SaaS platform, but three of the ones that stood out in conversations with customers across the marketplace were security, scalability, and manageable change.

**Security.** Many buzzwords are used in modern software to describe an overall security approach. This typically starts with a *zero-trust model*, where the default assumption for every piece of running code and the users interacting with it starts with an authorization model that allows nothing and is then granted privileges to do only what is needed to do the specific job it was created to do. One of the benefits of building a new platform is that you can take advantage of the latest and best solutions to problems from cloud providers such as Microsoft Azure that deal with these challenges every day on a massive, global scale.

Within our security approach we follow and depend on an authentication model that follows OAuth2 standards and allows each customer to manage their users and determine the policies, such as MFA, that are best for their organization. Do not assume that your on-premise solution is more secure than our SaaS: it is not.

**Scalability.** Most are already familiar with this component as the ability to do everything from adding on and removing services to applying grid engines to chunky processes is so inherent to cloud-based applications. However, this can get omitted when discussing legacy platforms that are now "in the cloud". True, they may be on a server that no longer needs support by your staff, but the entire technical architecture is not aligned to cloud and very much misses out on the great benefits (both technical and financial) of cloud scalability.

**Manageable Change.** Customers today expect nimble software solutions that continually incorporate improvements and features. Most legacy ETRM solutions are the opposite of nimble. We consistently pursue and achieve continual improvements through two key mechanisms:

First, we rely on our comprehensive knowledge of energy businesses to ensure that these changes stay within intended boundaries. Adding a new Natural Gas trade type should not (and does not) have any impact on how settlement of a power trade works, for example.

Second, we recognize that our platform is not the only component of our customers' technology landscape. We must work with other services for things like party data, market data, entitlements and financial accounting. By staying focused on the areas where we add value and defining clean API expectations for interactions with other solutions, we can consistently deliver manageable change.

## Business-Aligned Benefits

### Services Designed for Complex Organizations

Our platform has been designed to keep process interactions small, discrete and intentional. Most of these processes can be categorized into those which create data, and those which consume data. In the energy trading domain, there are really only two processes which truly create data: the first is trade management, execution and amendments. The second is the daily calculation process, where things like PnL Explain, MTM and settled cashflows are created.

**No single solution owns "All" the data.** This is an important reality. The two most obvious examples are market data and reference data. For decades, software vendors in the ETRM space required customers to import all of their reference data; counterparties, users, books, etc. Over time, this meant that the ETRM solution became either the system of record for that data, or an alternative source needing reconciliation to the authoritative source on a regular basis.

Neither approach was good but that was "just how it worked". Reference data is fairly simple, but when this same approach expanded to market data and even trades just because the ETRM system also became the accounting sub-ledger and was the only route to get data to the general ledger; then the complexities and problems became an impediment to growth and change.

Our platform acknowledges this reality from the beginning and has been architected to the reality that we do not "own all the data" and we are not the only participant in most business processes.

### Strategies Designed to Optimize

Every participant in the commodity markets is a unique organization. Those participants tend to have many things in common driven by their organizational mandates. Those mandates might include providing a long-term stable supply of a particular commodity into a market, maximizing a return within a set of risk tolerances, or rapidly entering new market segments to capture market share followed by exiting markets which no longer accomplish the mandates.

While these have always been businesses realities, the modern wrinkle is the speed at which they occur and the physical, geographical and political boundaries which help define them being more fluid than at any time in the history of our markets.

These characteristics are important to understand when considered in tandem with the aforementioned view on stable processes. When each organizational mandate is broken down into parts, those parts tend to have a process for managing it which is well-defined. Many times, organizations simply start or stop needing these individual "micro-processes" as they enter or exit a market segment.

Why is it necessary to write all this down when economic textbooks and efficient market principles have been defined in far more accurate and better written books? We think it is time that the software platform responsible for managing all of this is built based on the foundations of these principles in place.

And we have more to add. Likely lots more (we could do a whole paper on CI/CD alone) so if you are interested, please reach out to sales (info@lucidogroup.io) and we will keep you in the loop.