

THE DIGITALIZATION OF A COMMODITY ORGANIZATION

Before we can discuss what a digitalization strategy might look like for a Commodity Trader or organization in the Commodity Supply Chain, we have to first try to understand and define what Digital Transformation truly means. Digitalization, digitization, digital transformation and the multitude of other derivations of the latest technology buzz word, can be seen across the websites and white papers of many software and IT service organizations. Specifically in the CTRM industry, digitalization has been used to describe many products and strategies further blurring the lines of what a digital transformation means.

THE MEANING OF DIGITALIZATION & THE ROLE OF THE CTRM:

Digitalization or a Digital Transformation is the application of digital technology to an organization's processes, products and systems in order to improve efficiency, manage risk, maximize data utilization, and lower costs all in an effort to affect the bottom line or monetize new opportunities. So the question which needs to be asked is; can a CTRM solution be the answer to digitalization or are we seeing the overuse and dilution of a powerful transformation initiative?

CTRM systems have been around for far longer than the digitization trend. Then why only recently are we talking about CTRM systems within digitization. I believe the answer is in part due to the recent leap in technology adaptation and the rise of newer CTRM solution vendors, all of which have gravitated towards the use of the latest technology stacks allowing them to provide a "wider" CTRM offering. This includes CTRM as a service, or SaaS as well as the deployment of CTRM solutions on "cloud" or hosted environments. Several vendors have adopted technology tools such as automated workflows, task management systems, and artificial intelligence solutions to their offering. The problem however is that many of these vendors have created "modules" which sit on the periphery of their core CTRM functionality rather than being organically built into the solution. Additionally both vendors as well as organizations focus predominantly on the automation of workflow as the primary goal of a digital transformation project. This myopic approach can leave out key areas of improvement crucial to the tangible gains which should be expected from a holistic digital transformation. Addressing workflow without considering innovations in reporting powered by AI as well as the optimization of portfolios & arbitrage opportunities. Additionally, integration between the CTRM and ERP (GL) systems can provide robust enterprise wide reporting which if left unaddressed can leave critical gaps in providing a "single source of truth."

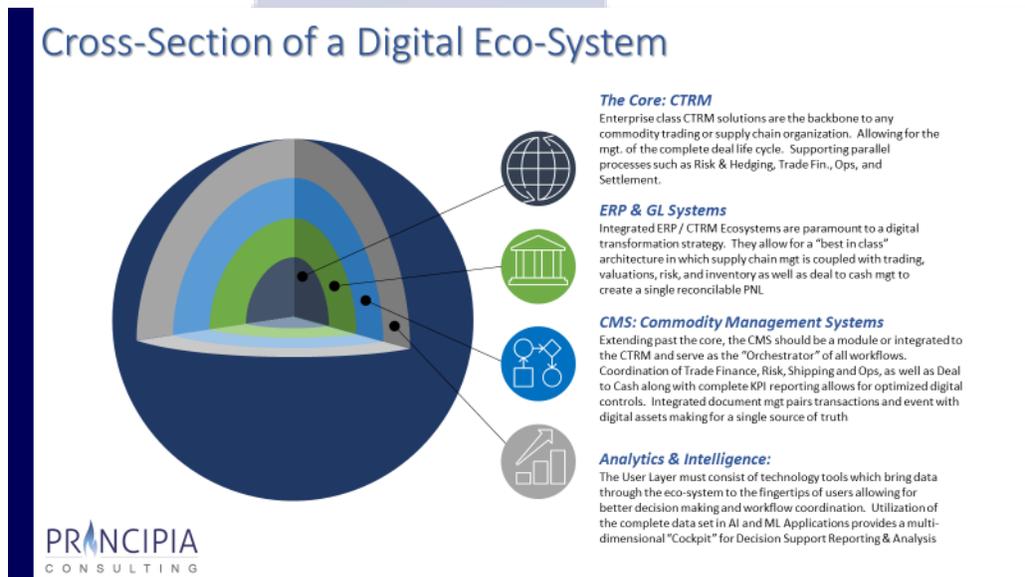
We must be careful however in understanding that although a CTRM solution is the backbone of a Digital Transformation, it is certainly not the only solution which must be considered in order to reach an automated, efficient and resilient ecosystem. Simply boiling down digital transformation to process innovation initiatives such as workflow reengineering or automation

of current business processes is not digitalization alone. Simply automating everything that was once done manually will not lead to a successful transformation. One must first consider the “why” factor behind the current business process in place. Many of these maybe legacy steps put in place prior to system improvements; some maybe work-arounds for gaps in the current system landscape, however some of these workflows maybe core to the organizations very DNA. A way of working or business process can sometimes be the very competitive advantage one organization has over its competition. It is crucial to dissect and understand both the “macro” and “micro” level workflows and hone in on those which are redundant, overly manual and look for ways to optimize these through technology. True Digital Transformation however, goes beyond just the workflows and looks at the entire organizational eco-system holistically.

DIGITAL TRANSFORMATION LAYERS:

Digital Transformation must focus on *three main criteria for success*. Firstly, it is providing users

with a “single source of truth” hence the need for enterprise class solutions and tightly coupled integration points between systems. Clearly no single



solution can provide all the required layers, nor should a single system strategy be taken. Best in Class solutions provide organizations with “built for purpose” functionality and with modern technology; integration between these solutions is far less complicated and burdensome. This is where a modern powerful CTRM solution comes in. Although many organizations will first look to implement or enhance their ERP solutions; the CTRM for a commodity trader must be considered the system of record and the *core* of their digital transformation initiative. With the CTRM providing accurate deal life cycle management and valuations including inventory valuation, the ERP / GL systems can be integrated utilizing a modern architecture to create a tightly coupled CTRM to ERP data exchange. This will not only enable efficient flow of data between the systems but will take away the painstaking effort of month end reconciliations between trading and accounting valuations specifically around inventory valuations and the need to provide users with both WACOG (to support trade decisions) as well as LIFO, FIFO, and

LCM based values. These two solutions represent the core layers of the transformation initiative.

Second, digital transformation must serve to reduce manual tasks and increase efficiency. It is not enough to simply “pave the cow path.” The current processes within the organization must be reviewed both individually, as well as holistically, to understand the co-dependencies that exist between tasks, departments, and inter/intra-organizational approvals. Understanding the current state will allow for refinement of the future workflows and allow the design to leverage on digital technology to reduce bottlenecks and increase efficiency. CMS (Commodity Management Systems) as a module within the CTRM or as standalone systems integrated into the ecosystem provide the “orchestration” of tasks within and across the enterprise. With workflows refined and in place an organization gains perspective on their processes with quantifiable results. KPI reports built into a digital workflow tool helps to pin-point areas of concern, reduce redundancy and better manage breach & approval conditions. With tightening margins across all commodity classes globally, any improvement in productivity can translate directly to the bottom line. Automation of task creation, calendar based alerts, reminders, and escalations built on “best practice steps” can all lead to further efficiency. The speed by which decisions and approvals can be achieved or the prevention of costly mistakes that eat away at profits is the true measure of digitalization within this layer.

Lastly the focus shifts to the outermost layer or the “Decision Support” layer of the digital strategy. The digital transformation in this layer consists of two key criteria. Firstly, this layer should propagate the information needed to support decision making with poignant integrated reporting coming together in a rich user interface which addresses the individual user experience. More importantly the data provided here is **not** meant to be a republication of the reports already available within the CTRM, ERP, or CMS systems individually, but rather an amalgamation of these data sets enriched with deep learning and artificial intelligence modules. The machine learning algos and their interactive AI tools are a crucial portion of a digital transformation. Ranging from forward price prediction in complex markets, to arbitrage optimization of positions; equipment failure prediction, or accounting anomaly identification; these tools take into consideration the core datasets available within the enterprise as well as introduce new data such as fundamental, weather, and news based data to provide powerful output results. When designed and implemented correctly these tools can offer some of the greatest advancements in productivity and knowledge sharing within an organization. Another aspect of the UI Layer must be visualization and interaction with the datasets and computed outputs. The user interface and user experience should provide data to its user community based on each user categorization with graphical dashboards which support drill down capability allowing users to go from high level reporting down through the organizational reporting structures and to the transaction or process where the data originated.

With optimized data output through the ML Tools the need for user based interaction is pinnacle. Users must retain the human element to the data allowing them to alter or “stress”

the data outputs altering the inputs or shocking the outputs in “what-if” scenario management. This interactive and graphical environment will not only boost productivity but in a digital ecosystem will also promote decision making and accountability from a “Single Source of Truth.”

IN CONCLUSION:

In conclusion a digital transformation strategy must focus on the “Core” systems which persist within the enterprise eco-system. If the organization is within a commodity supply chain then this focus is on the CTRM and ERP solutions and the key integration touch points between them. This initial phase sets the stage for aggregate consolidated reporting. Next the CMS portion “orchestrates” the business processes and automation of workflows as a key element to digital success. Lastly, the advanced machine learning and artificial intelligence technologies are incorporated into the reporting layer to provide users with the ability to optimize the digital functions, make faster decisions, and limit risk and error.

Digital transformation is a large undertaking and organizations need to make sure they are prepared for it. This means a change management strategy must be in place to ensure user migration and adoption. Additionally every organization should start with first understanding where they are. The “as-is” stage of a project is key to defining what the “to-be” will look like as well as help the organization manage change while embracing the future vision.

KEY BENEFIT:

Given the current work from home environment it can be argued that portions of the digitalization are now a must have in order to maintain operations globally.

Digital Transformation bears both tangible as well as intangible benefits for an organization. Improvements in workflow automation can provide productivity gains in terms of more efficient use of staff time and a better quality of life balance. Reducing redundant tasks and automating

approvals can add countless hours of efficiency to an organization. It can also provide more tangible gains such as “Deal to

Key Benefits of Digital Transformation:

01 *Productive & Efficient* – Creates a highly productive and automated environment for maximum efficiency

03 *Deep Analytics & Decision Support Tools* – provide greater clarity in decision making to maximize Profit

05 *Paradigm Shift-* Transformative at all levels of the business value chain

01

03

05



02

04

02 *Lower Overall Technology Cost* – Cost Effective Technology supports lower TCO with Cloud, SaaS, and Rich Integration

04 *Enterprise Wide Reporting* – Create a single transparent valuation “Single Source of Truth”

Cash” timeline improvement. This can provide a direct benefit to capital costs, and optimizing the use of credit lines and cash in order to sustain business growth. Powerful and poignant reporting which leverages both tightly coupled CTRM and ERP solutions as well as AI based engines offer a clear vision into risk position optimization and hedge analysis. Ensuring the correct hedge ratio is utilized as well as critical back testing of hedge effectiveness can result in lowering the cost of hedging with fewer transactions and lower margin utilization. It can also provide management with the comfort of knowing that any deal labelled as a “hedge” is actually providing risk protection and has not become a speculative position. Sadly we have seen this very mistake resulting in the downfall of some of the world’s largest trading organizations in Asia.

The accurate and transparent valuation of positions including inventory valuation, as well as sound risk management and hedging policies which can result from digitalization are also the same reports and criteria used by many of the world’s leading banks when making trade finance decisions. The right systems producing the correct reports can provide the trade financing essential to a trading companies growth and success.

Digital Transformation results in a true paradigm shift within organization. It provides a shift from data gathering and collecting to data utilization. It provides a depth and dimension to reporting which creates true decision support rather than offline spreadsheets and manual analytics. Most importantly it can provide the optimization and arbitrage calculations essential to enhancing a company’s bottom line.