

Aspect 

## Integrating Accounting With ETRM & CTRM Software



Whitepaper By Aspect Partner **resourcefueled** 

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# Integrating Accounting With ETRM & CTRM Software

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# How To Interface An Accounting And Trade And Risk Management System Using A Disciplined Approach



This whitepaper is written by Adam Rice of **ResourceFueled**, an Aspect Premium Partner that provides the oil trading industry with management consulting solutions across the Front, Middle and Back Office for trading companies.

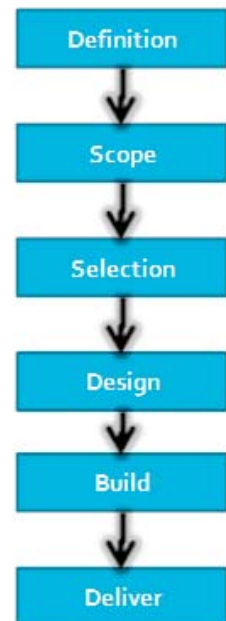
Adam is a Chartered Accountant who is a member of the Institute of Risk Management. He has worked as a trader, financial controller and business risk analyst at leading companies including Trafigura, BP, and Noble. Adam is an expert on ETRM systems and the author of **“Resourcefueled’s 10 Step Process,”** which helps clients accurately map their business procedures.

## Introduction

As a leading provider of commodities trading and risk management software, Aspect’s team of experts is spread out across the globe developing, deploying and supporting clients with productized and customized solutions. Being able to reach out to partners who understand their software and clients’ needs is a strategy Aspect relies on to further expand its resources and business. ResourceFueled is part of the Aspect Partner Network (APP) and is a proven resource for clients who need customization.

At ResourceFueled, we are often contracted by a client to implement custom interfaces to meet a company’s specific needs. We recently implemented an interface of Aspect into an accounting system. The accounting system in this instance was SunSystems, but it doesn’t make much difference what the accounting system is, the process is the same for any accounting integration.

In this case our client had contracted us to build the interface. The most eye-catching part of the interface is building the reports for the journal entries. This happens near the end of the project and because we have done interfaces before, the writing of these reports are done relatively quickly. Aspect’s **excellent script writing functionality** makes this a well-defined task which is quite fun to do for those of us who like getting into ‘the zone’. Before writing the reports, there is a lot of analysis and options for the client to consider before decisions can be made.



## Where Should Data Be Held?

Data must be held in its richest form where that richness is needed. Richness refers to the completeness of the data, with lots of detail. A good example of this is customer data. In some parts of your system you

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may want to hold details like reference numbers, addresses and customer emails. In other parts of your system, only the customer reference number and name is needed. The customer data in the case of this implementation needed to be rich inside AspectCTRM where invoices are to be produced. It could be sparse in SunSystems because those extra details are not needed. You never want to enter customer data into two systems because that would create a double entry situation where inaccuracies occur. We needed to move data from the database which holds data in a rich form into a database that holds it in a sparse form.

**Data should be reported from the system that is most appropriate for a specific report. For instance, you can:**

- Report from the system where necessary data from different streams come together.
- Report from the system that can perform the necessary calculations.
- Report in the system that is used by the users who need the report.

An interface could be a person analyzing the first system and updating data in the second. For instance, taking a list of invoices in the trading system and typing journals into the accounting system is an example of this.

**An automatic or semi-automatic interface has the advantages of:**

- Saving users' time in typing out journals.
- Speeding up the process with faster report delivery.
- Avoiding human errors from typing.
- Avoiding human errors from users' mental exhaustion.
- Ensuring consistency of approach with all users.
- Avoiding omission of entries.

The biggest advantage of automation is that users can focus on inspecting completed work, rather than executing the work. Users can ensure accuracy by seeing if the numbers make sense in themselves and in the context of the known results and positions of the business. Often, managers find that manually interfaced reports contain data that does not make sense with their business.

## Two-Stage Solution

The client usually has the idea that one of the possible outcomes of an interface is that it is completely automatic and that the required data

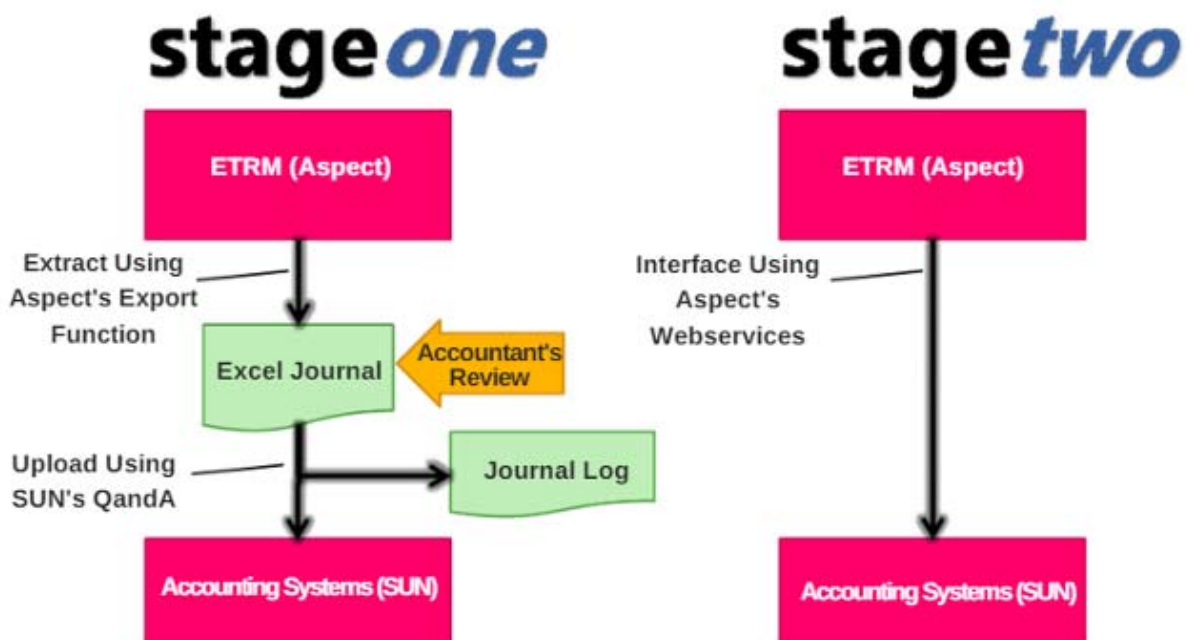
just 'turns up' in the accounting system without anyone doing anything. This is the ultimate goal, and to achieve this we use web services. The data doesn't magically appear of course. It moves in regularly scheduled updates managed with alerts on errors and processes to ensure CAV (CAV = completeness, Accuracy & Validity) and this involves the client's IT department.

There is another possible outcome which is semi-automatic. This involves outputting a journal from Aspect into a program like Excel, that can then be uploaded into the accounting system.

ResourceFueled prefers to deliver changes in stages to reduce project risk. The idea is that each stage delivers tangible benefits, but is complete in itself. It isn't imperative that further stages are delivered for each stage to be effective. If the client needs or wants to make changes to the overall plan or to later stages, then they are free to do so without wasting work that has been paid for.

In this case study of building an interface, the first stage was to deliver a semi-automatic interface. The second stage was a fully automatic interface.

The first stage delivered most of the advantages of the interface such as saving time and resources, increasing accuracy, speeding up the process and ensuring consistency. Accountants signed off on the process once



the first stage was delivered after reviewing journals before they were uploaded.

We recommend that the semi-automatic process is run for a few months so that the accountants have the chance to get used to the rhythm of the process while they have full control of it and can digest it. During this period, they become familiar with it and can recommend tweaks and improvements to the process and the content of the journal. At this stage, it is easy to make changes.

Once the process settled down and everyone was sure it was working for them, the business got comfortable with running the second stage of the project which was to deliver full automation with web services, which is what we did next.

The second stage added less of a step change in benefit than the first stage. Speed was increased slightly and small savings in resources were achieved, but a small increase in IT support resources offset the savings.

## Analysis, Options, Decisions

Every company has a different process for accounting. What we do as a partner is ask those key questions that impact our clients' business and the new interface that will help them improve their processes.

**Here are some key questions we asked our client before getting started:**

- Which legal entities are covered and how will they be posted?
- How will reference data be controlled and entered?
- How will data be reported in the two systems, and how will it be compared and reconciled?
- What will the requirement for month-end accruals be? – At ResourceFueled, we think it's valuable that accruals are generated in AspectCTRM and then posted into the accounts each month.
- How will the bank reconciliation be carried out? Is there a separate bank account for trading related items? The bank reconciliation is the primary control in a business and is affected by how you generate cash journals.
- How will route 1 and route 2 ancillary costs, like freight, demurrage, and inspections, be settled and accounted for?

- What is the strategy hierarchy and can we rely on anything that needs to be posted appearing at the 'leaf' level?
- How will transactions be deleted and should they be soft-deleted?
- Which controls can be implemented to ensure that assumptions we make cannot be contradicted? AspectCTRM has ways of building preventative and detective controls.
- Where will balance sheet reports like debtor/creditor reports be generated from? This determines whether you need to hold cash movements in AspectCTRM and therefore have a cash interface. We generally recommend that you run these from AspectCTRM.
- Will cash be entered into AspectCTRM and interface into the accounts, or will it be the other way around? The former is easier but makes the bank reconciliation more convoluted. If the latter is chosen, will a workbench need to be built for this to work properly?
- How will prepayments work?  
Once our clients understand this process, we can move forward, which we did in this case.

## Accounting Policy

There are three accounting policies that are relevant.

<p><b>Fair Value Accounting</b> This would be better called unfair value accounting. It means valuing everything at an objectively verifiable value. This means that forward physical trades are not given a value and all hedges on those forward trades are valued.</p>	<p><b>Hedge Accounting</b> This would be better called Not Hedge Accounting. It means not accounting for those hedges that are hedging forward trades. It's a compromise.</p>	<p><b>Mark-to-Market Accounting</b> Everything is valued as we would do in management reporting. The trouble with this is that it is not allowed under accounting rules.</p>
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### So how do you want to post accruals into the accounts in these circumstances?

Our client agreed that we would post into SunSystems using Mark-to-Market (M2M) so that the PnL in AspectCTRM and SUN are equal. Then, for the annual accounts only, the accountants worked on final manual journals and IFRS adjustments to change the profit to conform to fair

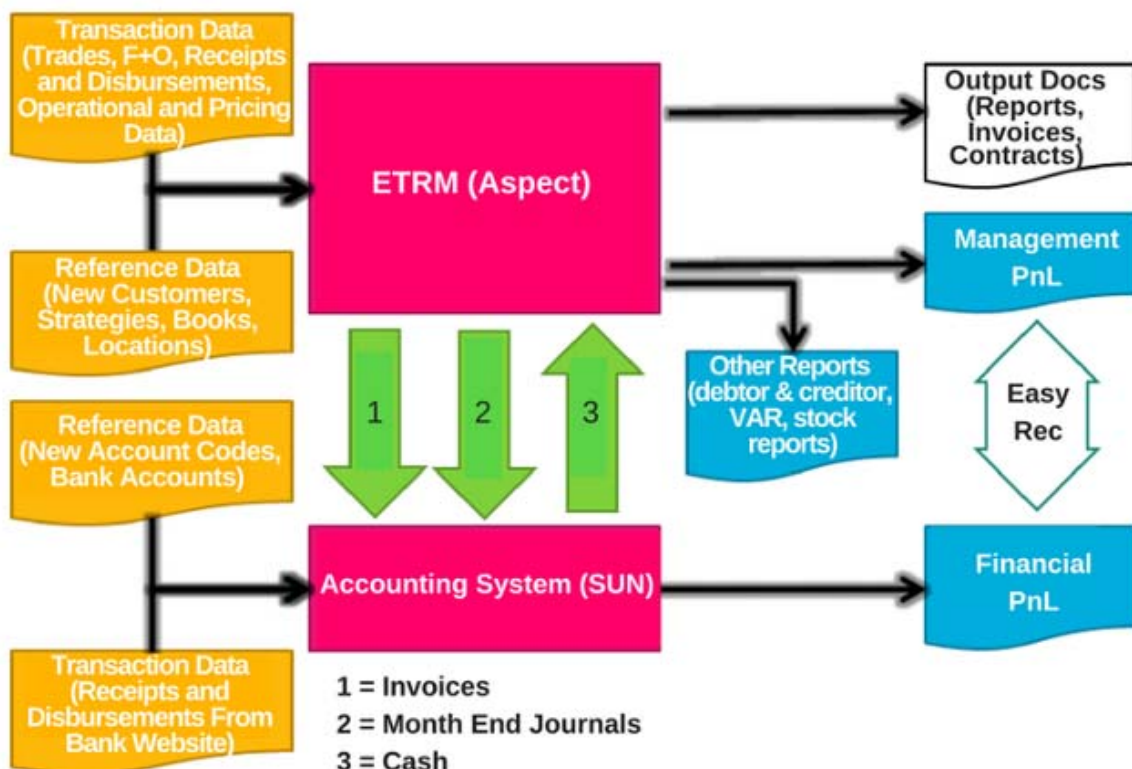
value accounting. When discussing with banks and other stakeholders why the profit in the annual financial statements doesn't agree with management's numbers, managers can refer to the "IFRS adjustments".

## The Technique: Completeness, Accuracy and Validity (CAV)

Once the process was agreed on, the project moved on to design the interface:

- Physical payable and receivable invoices are posted daily to the ledger.
- Paper is posted at the end of the month.
- Daily cash enters the accounting system and data is then passed to AspectCTRM.
- Accruals posted at the end of the month are posted as reversing journals.
- Customers, strategies and locations are updated in AspectCTRM first and then downloaded or otherwise updated in the accounting system.
- New GL account code is entered into the accounting system first, and then updated in AspectCTRM

There is a reconciliation process after the month-end to prove that the profit and positions in the two systems agree.





We then had to decide which data needed to be included on the journals. This was dependent on how the data was already set up in the ledger. For instance, we had to look at which fields are required and what account codes are needed. Validations also needed to be set up. SunSystems has good functionality here. Decisions were made to determine which fields are analytical and therefore had strict validities, and which fields are for information.

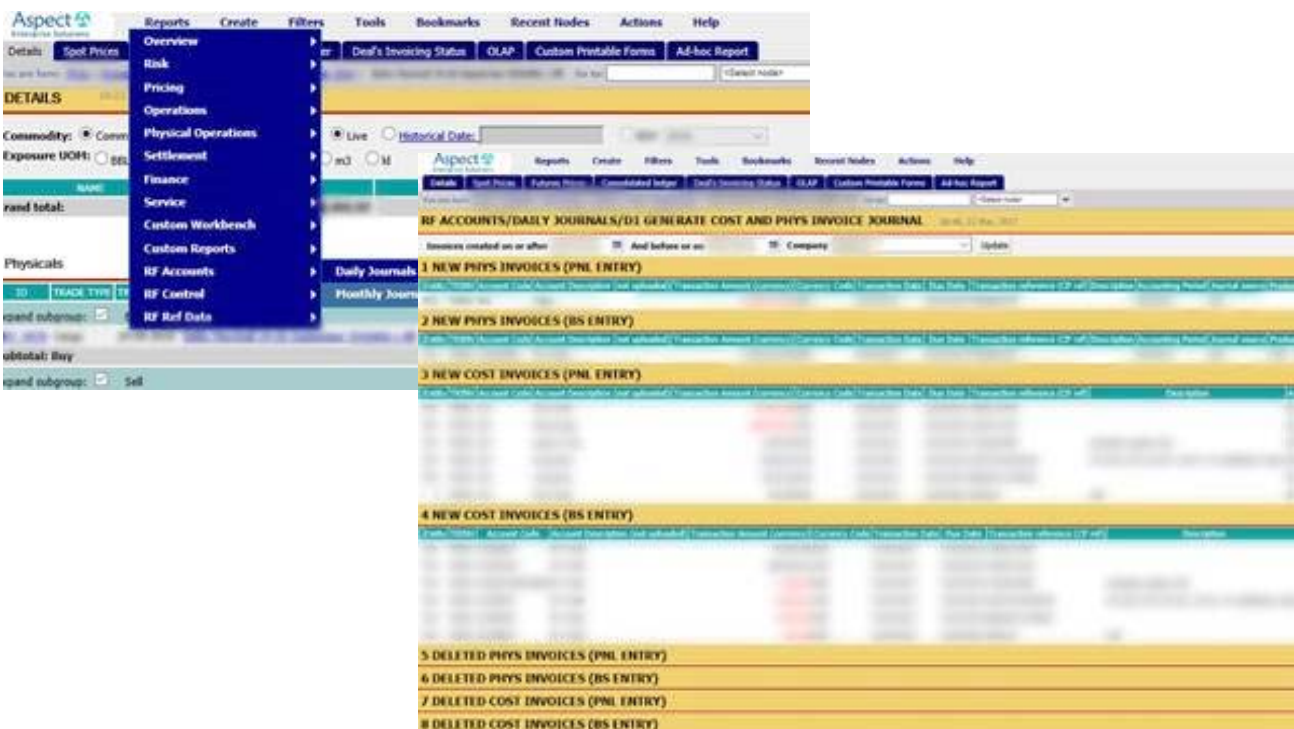
**Reference data had to be updated in AspectCTRM. This includes things like the following.**

- Give all counterparty records in AspectCTRM the accounting customer reference numbers.
- Update bank account records with the bank general ledger code.
- Ensure all strategies had an accounting symbol.

Secondly, GL accounting codes had to be set up in the ledger to accept the trading data. In every project ResourceFueled has done, this needs to be completed.

## Creating Reports

It is now time to write the reports in AspectCTRM. This is something that can be done fairly quickly in scripts because they have been written before and most of the tricky problems already have solutions, but it is





Aspect delivers the world's leading multi-commodity market data, trading, risk and physical operations management enterprise fully delivered Software-as-a-Service (SaaS) in the cloud. Its rich functionality, competitive advantages and Web-based benefits are proven winners used by more than 500 organizations and thousands of users in over 90 countries globally. AspectDSC is the Decision Support Center module of AspectCTRM for traders with real-time and historical commodities news, spot and futures prices, and analytical charting tools on desktop, tablet and mobile devices.

devilishly difficult to be accurate the first time. Extensive testing had to be done to confirm that the output was correct. The reports that are created are transformed into a format that can be uploaded into the accounting system. We did this using a macro that is available to users as an add-in on everyone's computer. Users run reports that they want posted. The macro takes each report and sorts and formats it so that it is ready to be uploaded. It also adds journal details to a journal log which records when it is posted, which type of journal it is, which period it covers, the legal entity, etc. It then closes the original report so that it isn't posted again. The user just runs the macro/ posts until all journals are complete and reports are closed.

## Keeping Data Clean In The Trading System

It is important that the data is kept in the trading system in a way that works for accounting. With AspectCTRM, you want to keep all your transaction data at 'leaf node' level, make sure reference data is complete, account for all out-turn losses, and make sure that stock matches reality. Users can set up preventative and detective controls to make sure this happens.

## Conclusion

Overall the project was a success and the client was able to catch up on their backlog of accounting and move forward in an efficient, accurate, and professional way to ensure the business is monitored and financially accountable.



ResourceFueled provides the oil trading industry with management consulting solutions across the front, middle and back office. ResourceFueled supplies its clients with specialist consultants who have first-hand experience of the integrated crude and refined products supply chain. ResourceFueled has in-depth understanding of the physical and paper oil markets and the services that support them. This enables ResourceFueled to engage with a customer base across the key business areas of ETRM by providing comprehensive implementation and integration solutions.