

**Bonsai Development  
Corporation**

Powering on-demand Information Networks



SOLUTION WHITE PAPER

# **TRADE FINANCE INFORMATION NETWORK**

An on-demand Information Network

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# BDC Trade Finance Information Network



## Executive Summary

Trade represents 30% of the global economy.

Globalization over the past decade has massively increased the volume and value of trade worldwide, and at the same time increased the inter-dependence between trading partners to maximize service and minimize working capital requirements. A recent Aberdeen report found that 90% of companies surveyed viewed their global supply chain technology as inadequate for today's needs. Furthermore, the changes in trading patterns should have led to a revolution in financial services to serve this dynamic market, but this is not happened: the highly automated supply chain does not interact effectively with traditional Trade Finance instruments should as Letters of Credit. With most other corporate functions now being automated through packaged technology (MRP, ERP, CRM, eProcurement, etc), Supply Chain Finance represents the last bastion of manual processing.

The obvious way to improve this situation for banks to shift to a holistic OPEN ACCOUNT MANAGEMENT model in which transactions and supporting documents are made visible to all players in the Supply Chain Finance process. With visibility comes the ability to integrate traditional silo functions such as operations and treasury, and offer predictable cross-company processes for smoother operations. We call this Transactional Trade Finance, where every document in the supply chain can be connected to a financing event.



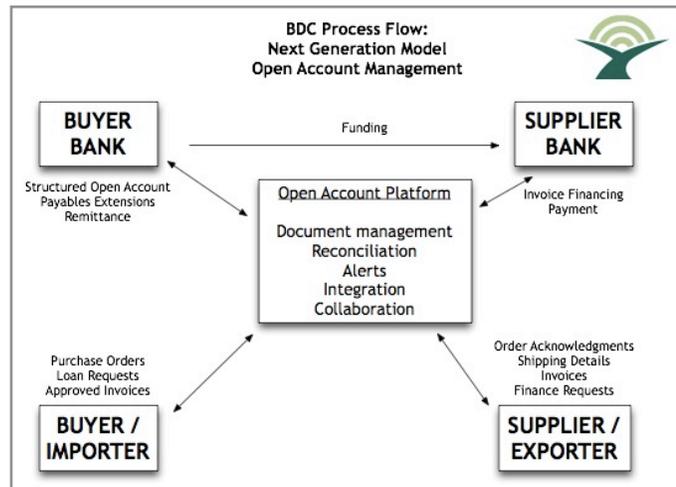
In the short term, Open Account Management enables existing demands to be met in a cost-efficient and timely manner: visibility to cross-company documents, reconciliation of multi-organizational processes. In the long term, such systems will enable new and revolutionary processes to come to market. With increased visibility to business documents, reconciliation functions, and RFID-enabled non-repudiable events (shipments, embarkation, etc), trade flows will become increasingly securitized. This in turn will lead to a new generation of Asset-Based lending strategies and products for banks. BDC supports such short-and long term opportunities through three main capabilities:

- A service-oriented model for Open Account Management
- A flexible, N-way configurable document definition, tracking and reconciliation approach
- An event-driven platform already integrated with new technologies such as RFID

## The on-demand Trade Finance Information Network

BDC has developed the on-demand Information Network architecture to support the needs of large-scale aggregation and distribution of information arising from business documents (orders, invoices) and physical events (inspections, certification). We have also built the BDC Trade Finance application to make use of this infrastructure, as well as other prototypes and pilots in additional industries.

Our Trade Finance solution is designed to be run as a service, rather than deployed as enterprise software. This makes us uniquely suited to partnerships with



Financial Institutions and other organizations such as trading groups. By aggregating and matching business documents across multiple companies, we provide secure and reliable visibility to trade transactions to multiple interested parties. This in turn enables:

- Finance Providers to offer transactional trade services (payment, factoring, asset-based lending) for one or more transactions
- Finance Providers to see a pipeline of finance transactions so they can proactively offer services to customers
- Buyers to improve management of supply chain finance
- Vendors to gain access to new sources of accelerated working capital

## Evolution of Trade Systems

Shipping companies, manufacturers and suppliers, in combination with buying organizations have worked together over past decades to streamline the logistics and transportation aspects of international trade, but much less has been done to optimize the set of services such as Letters of Credit, Export Guarantees, Insurance that are known collectively as “Trade Finance”. This area involves sophisticated Document Management and needs to be seen in the context of an overall workflow: what we will call here “Open Account Management”.

Banks have traditionally provided Trade Finance services, but these remain expensive, involving highly paid bankers who generate fees and interest charges. In a world where competition has swept away most other inefficient processes, Trade Finance services remain artificially expensive and hard to track. Business documents arising throughout the trading workflow are often paper-based and not easily visible: it is the complexity of tying all this together that justifies the fees. However, if we can manage the variety of types and media of various documents, package them in a predictable workflow and apply Open Account Management to the flow of documents, we can simplify and streamline much of the Trade Finance process.

In parallel, RFID (Radio-Frequency Identification) is a technology in the news. A combination of mandates from large organizations such as Wal-Mart and the Department of Defense, along with the many interesting potential applications of RFID makes it a hot topic for all companies that make, ship, store and sell goods. It also enables (for the first time), automatic recognition of containers, pallets and products in specific locations just by coming into proximity with electronic reader equipment. Furthermore, RFID can enable electronic “documents” which can be encoded and secure: for example, manifests can be stored on smart cards to be read wirelessly alongside movement of the goods they represent.

By connecting a combination of electronic documents, such as orders, shipping documents, receipts and customs documents, as well as a set of RFID-driven physical “observations” the framework is set for an overhaul of Trade Finance, with big implications for banks and how trading companies do business. Docu-

ment management on this scale will enable a new generation of Open Account Management services. RFID is in its infancy, but will inevitably roll out on a worldwide basis. Whoever prepares best to exploit this technology will be in the driving position for the coming decades.

New online services that enable the fulfillment of Open Account transactions, including documentation creation and tracking, data integrity, and automated document reconciliation, are an ideal platform to drive trade financing services. Importers and their suppliers have expressed the terms on which they will conduct business and have captured these rules within applications to reduce the risks of non-payment and/or product delivery. Most of the docu-

Date	Item	Context	Location	Unreconciled Days
Saturday, December 3, 2005 11:11 AM	UCLU 015753 4 ZA 22G1	SHIP	T236 Macau	
Monday, December 12, 2005 11:12 AM	UCLU 015753 4 ZA 22G1	RCV	G340 HongKong	0
Monday, December 5, 2005 11:13 AM	UCLU 015753 4 ZA 22G3	SHIP	T236 Macau	
Monday, December 12, 2005 11:14 AM	UCLU 015753 4 ZA 22G3	RCV	C340 HongKong	0
Monday, December 12, 2005 11:15 AM	UCLU 015753 4 ZA 22G5	SHIP	T236 Macau	15
Thursday, December 15, 2005 4:23 AM	UCLU 015753 4 ZA 22G5	SHIP	T236 Macau	
Thursday, December 15, 2005 4:24 AM	UCLU 015753 4 ZA 22C5	RCV	C340 HongKong	0
Thursday, December 15, 2005 4:25 AM	UCLU 015753 4 ZA 22C9	SHIP	T236 Macau	
Thursday, December 15, 2005 4:26 AM	UCLU 015753 4 ZA 22C9	RCV	C340 HongKong	0
Thursday, December 15, 2005 4:27 AM	UCLU 015433 4 ZA 22G1	SHIP	T236 Macau	16

mentation and data is available to quickly and efficiently trigger trade finance requests from financial institutions.

Open Account Management is key to the holistic view of trading events: it is what allows service providers to predict and offer Trade Finance Requests as needed and on an On-Demand basis. If the bank is the provider of the Open Account service, then the bank has the unique ability to provide the trade financing based upon the data and documents available. Furthermore, the automation of the full Open Account process enables service providers to move beyond process outsourcing and offer exception-based visibility services. The shift from a paper-based, batch-based model to an exception-based, On Demand model will take years, but services can start now based on current technologies.

BDC has developed a Trade Finance Information Network solution that can be deployed across a number of organizations and companies to create an on-demand model for tracking work-flows of business documents and physical events across multiple locations. This technology enables service providers to

offer Open Account Management services, starting with simple processes such as invoice matching, and extending into full Open Account Management for global trade. This paper is intended to provide a briefing on this solution and examine the benefits of deployment of such an approach.

### The Problem

The documentation and inspection trail for trade flows is spread over a long time period and involves many parties. Pulling the documentation together is the problem, and there is great complexity in tracking and reconciling orders as items are shipped, loaded, transported, and received.

Some of this information is systematic, such as the Purchase Order, which for most large buyers is already automated using SAP or other packaged applications and communicated electronically using EDI or XML. Other items of information are manual and paper-based, such as confirmations and bills of lading which may be faxed or mailed to several parties for processing. Other data is human-oriented in nature, such as inspections requiring signatures that goods are indeed in a specific place at a certain point in time: these type of Trusted services require human intervention or innovative use of technology to ensure non-repudiation of the data.

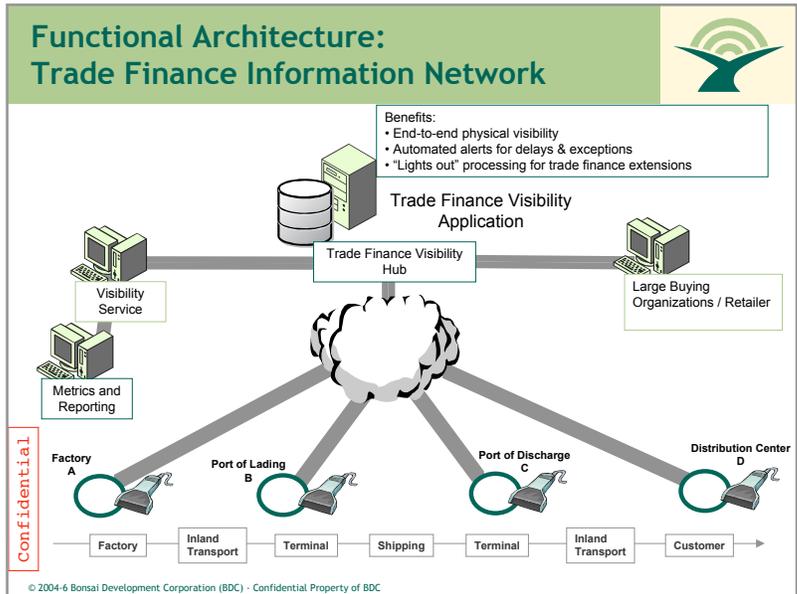
Until all this data can be pulled together, there will never be an opportunity to track all steps in the Trade Finance process electronically. To do this requires several approaches:

- Where automation is possible, enable easy aggregation and integration of electronic documents;
- Where documentation is manual, automate this through portal-based services; and
- Where physical tracking is required on a “lights out” and Trusted basis, use RFID to support the authentic creation of this data.

The implications of solving this problem are huge. In terms of the streamlining of trade processes, automatic tracking and reconciliation of trade transactions will reduce the time, effort and cost of processing. More significant still is the implication for interest costs: as more visibility becomes available, banks will be able to offer transactional rather than umbrella services and match commerce with finance more accurately. It will be possible to securitize trade service transactions and enable improved risk management.

### The Solution

The rollout of BDC’s Trade Finance Information Network will depend on the requirements of each customer. In all cases we expect to be aggregating business and physical documents from many locations to build a repository of documents for reconciliation against a defined and configurable workflow. In addition,



tion, we expect to be defining an n-level workflow for trade transactions to enable us to match and reconcile each trading step as it occurs. What makes us unique is that this may also include RFID-derived signals through our proprietary Trusted Reader Network.

The benefits of this approach include:

- Improved and complete visibility into trade and shipping activities
- Ability to create, manage and distribute business documents to support an Open Account Management service
- Reconciliation of n-step business processes
- Support for financial activities based on improved transactional visibility.

### Operational Setup

The Trade Finance Information Network may be run in several modes of operation:

- **Enterprise Network:** Setup to connect multiple locations within an existing enterprise network
- **Shared Services Network:** Setup to connect multiple locations and multiple company operations on a shared service basis (e.g. a multi-national trading company)
- **Hosted Network:** Configured to be run as a third party services network.

### Functional Model

BDC Trade Finance Information Network has been developed to be deployed quickly and easily in multiple locations. Functionality includes the following:

1. **Configurable work-flows**  
starting with simple pre-defined flows (Domestic Supplier Invoice aggregation and reconciliation), users can define additional business documents and work-flows to expand and personalize the reconciliation capabilities.
2. **Sophisticated Document Management Model.**  
Aggregate documents from multiple sources: XML or EDI transactions where appropriate; hosted web entry or Excel upload of documents; upload of attachments and faxes; and event-driven documents derived from RFID signals. all these documents can be collected to the BDC repository for use in the reconciliation process.
3. **Reconciliation**  
Once data is aggregated, matching and reconciling the pre-defined workflow can be done online or automatically. Exceptions can be identified and communicated to suppliers for resolution.
4. **Hosted deployment**  
Where numbers of small suppliers are involved, data collection can be done through submission of online forms to maximize the percentage of document handling done online.
5. **RFID-ready**  
For incorporation of event-driven, authenticated transactions from trusted sources, BDC offers the ability to plug these right into the reconciliation process where required.
6. **Alerts and Notifications**  
User-defined reports can be stored and used as the basis of scheduled alerts and notifications, definable by users

company running the trade Finance Network as well as (on request) to third parties such as customers and business partners.

The effect of this solution is transformational. By enabling visibility into physical quantities and movements of goods, companies can improve their customer service and collaboration processes and support new ways of doing business hitherto considered impossible.

If you would like to learn more about BDC, On-Demand Information Networks and specifically the BDC Trade Finance Information Network, please visit us as [www.bonsaidevelopment.com](http://www.bonsaidevelopment.com) and contact us for further information.

## Technical Model

BDC Trade Finance Network is designed to be deployed in a networked environment, involving multiple locations and multiple companies.

The key components of the technology include:

- BDC Hub, including Document Repository
- BDC Node(s) where required for a Trusted Network.
- BDC Mobile Gateway (where required)
- BDC Adapters (Systems)
- Trade Finance Information Network Application

## Summary:

The BDC Trade Finance Information Network enables distributed data capture of business documents and event-driven RFID information across and within company organizations. This information can be made available immediately on an on-demand basis to the