

4.0 Customer

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4.1 Introduction and Scope of Effort

This section defines the data exchange interfaces necessary to support the qualification and identification of registered Buyers (See 4.2.1 Marketplace Model) between a Marketplace and participating Sellers. The following business transactions, which may be considered part of a Buyer Qualification process, are supported and discussed in detail below:

4.1.1 Customer Messages

The following business transactions are discussed in this section:

| | |
|-------------------------------|---|
| Qualification Request | <p>The Qualification Request transaction is used to provide notification of a Buyer, from a Marketplace, to one or more Sellers.</p> <p>This message is part of a request/response pair and anticipates a Qualification Response message, in reply.</p> |
| Qualification Response | <p>The Qualification Response transaction is sent in response to a Qualification Request and is the Seller's response to the Marketplace, for a specific Qualification Request.</p> |

The Qualification Request transaction takes place between the Marketplace and the Seller and enables the identification of a Buyer through the Marketplace. The optional data elements (such as account information, addresses, and financial information) are defined and may be included at the discretion of the Marketplace.

The Qualification Request message includes many of the basic data elements of a typical customer registration record. The Qualification Response is a short message containing the return status of the initial Qualification Request.

4.1.2 Key Scope Assumptions

- A Business Partner is identified at the requested company level. Individual companies may be further identified as Buyers, Sellers, Distributors, etc. within the Marketplace.
- Standard values for the Partner Identifier elements are necessary to uniquely identify Business Partners.
- It is not the intent of the Chem eStandards to develop standard customer master information across Marketplaces and Business Partners. Instead, these specifications include a minimum set of information necessary to identify a Buyer to a Seller.
- It is not the intent of the Chem eStandards to change current business processes for Buyer evaluation, creation, or maintenance within the Seller's organization.
- The Marketplace is responsible for collecting sufficient information about the Buyer to initiate a qualification request to a Seller. It is not the intent of the Chem eStandards to standardize that data collection process.

4.1.3 Key Business Model Assumptions

The Marketplace model introduces a new method for establishing and maintaining business relationships for electronic transactions in the Chemical Industry. The following are assumptions regarding these relationships within a Marketplace environment.

Pre-Conditions that exist prior to generating a QualificationRequest transaction:

- Partner Identifiers are used to uniquely identify a registered Business Partner and their respective locations.

Business assumptions that govern the exchange of messages:

- The Marketplace collects and maintains a record of Buyers and Sellers, their relationships, and their transactions in the Marketplace, in accordance with the contractual agreement between the concerned parties.
- The Marketplace ensures that a Seller is given the opportunity to accept or reject a new Buyer by offering Qualification prior to the execution of a business transaction and/or triggering Qualification at the point of a first transaction. This processing applies to both contract and non-contract purchases.
- The Buyer Qualification process, as described in this document, is not relevant for direct, B2B transactions between Buyers and Sellers (i.e., Qualification Request and Qualification Request Response transactions are not applicable in a B2B Model between Buyers and Sellers).

Post-Conditions that are anticipated after messages are sent:

- It is the responsibility of the Seller to decide whether to do business with the Buyer, having evaluated such things as a Buyer's credit worthiness, reputation, and product stewardship.

4.2 Business Process Information

4.2.1 Business Process Descriptions

In general, a Buyer chooses to participate in a Marketplace, which is typically followed by the Registration process for that Marketplace. Next, although not necessarily triggered by the Registration process itself, the Marketplace facilitates a Buyer Qualification process between the Buyer and a registered Seller. This process entails sending the Qualification Request transaction to the Seller. (It is important to note that the Buyer Qualification process may be initiated by several different business events within the Marketplace, each are discussed in detail below.)

Upon receiving a Qualification Request, a Seller typically evaluates the potential Buyer. After evaluating the Buyer, the Seller needs to return a Qualification Response transaction to the Marketplace. Based on the information contained within the Qualification Response, the Marketplace typically performs a Marketplace-defined business process (for example, if approved, provide access to Buyer). Finally, the Marketplace may choose to communicate the response (i.e., status) of the Qualification Request to the Buyer.

4.2.2 Business Process Diagrams

The general business process model for the qualification and identification of Buyers via a Marketplace is depicted in the following diagram. Solid thick lines illustrate the transaction between the Marketplace and Seller. Solid thin lines illustrate the Buyer to Marketplace transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

Qualification Request/Qualification Response

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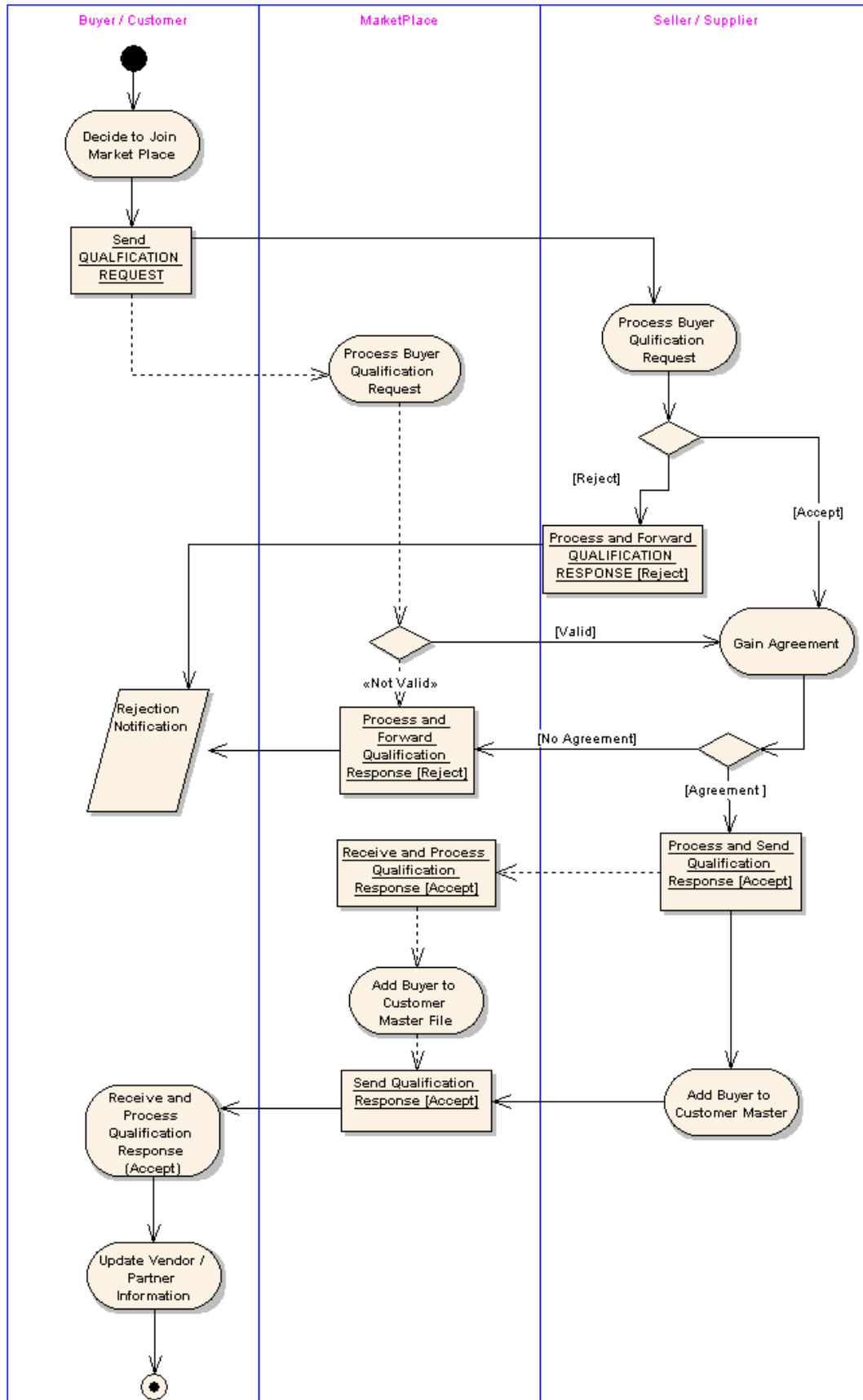


Figure 4.2.2.a: Qualification Request/ Qualification Response transactions

The following Marketplace model business processes and their associated transactions are discussed in further detail below:

- Marketplace Registration
- Buyer Qualification

Marketplace Registration

The collection of business information required for the Marketplace Registration process is initiated when a Seller or Buyer makes a business decision to join a Marketplace. A Chem eStandards transaction has not been developed to enable the Marketplace Registration process for the following reasons:

- Since the event that initiates the Marketplace Registration process is a manual, business decision, it is unlikely that Registration will become an automated transaction requiring a standard XML message. However, once a Seller's or Buyer's identity has been established within a Marketplace (i.e., saved or stored electronically), automated transactions between Buyers, Sellers, and the Marketplace may occur.
- Marketplaces within the Chemical Industry may adopt different business models, provide different types of services, and target different segments of the market, which in turn drive very diverse registration requirements from Business Partners. The diverse registration requirements that can be anticipated between Marketplaces may likely limit the adoption and compliance of a Chem eStandards transaction for the Marketplace Registration process.

To effectively leverage and apply the Chem eStandards described in this document, the Marketplace Registration process should obtain the following from all Business Partners that desire to join a Marketplace:

- D-U-N-S Number - Unique, 9-digit global company or business identifier assigned and maintained by Dun & Bradstreet. Note: **All Business Partner locations desiring to participate in a Marketplace must be registered with a unique identifier and Chem eStandards endorses the use of the D-U-N-S Number while acknowledging that other unique identifiers maintained as standards may be used.**

Buyer Qualification

The Buyer Qualification process is initiated when a Buyer indicates an interest in doing business with a Seller via the Marketplace. A number of scenarios may initiate the Buyer Qualification process, and these are discussed in detail below:

- Existing Contracts
- First-time Purchase Order
- First-Time RFQ

The Buyer Qualification process as it is described below, is limited to qualification at the company level (i.e., financial evaluation, credit worthiness, or reputation). Since Buyers and Sellers in 'open' Marketplaces may not have an existing business relationship, qualification at the product level (i.e., product stewardship, regulatory restrictions), may only take place following the submission of a Purchase Order or RFQ to the Marketplace. It is important to realize that

the Buyer Qualification process is purely a Seller's affair that occurs only once for a given Seller/Buyer relationship.

4.2.3 Business Scenarios

Specific scenarios that initiate a Qualification Request transaction followed by a Qualification Response are presented below, along with hyperlinks to sample messages that illustrate the use of these transactions.

- **Business Scenario 1 - Existing Contracts**

The Business Process Model for Existing Contracts using the Marketplace model is depicted in the following diagram. Solid thick lines illustrate the transaction between the Marketplace and Seller. Solid thin lines illustrate the Buyer to Marketplace transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

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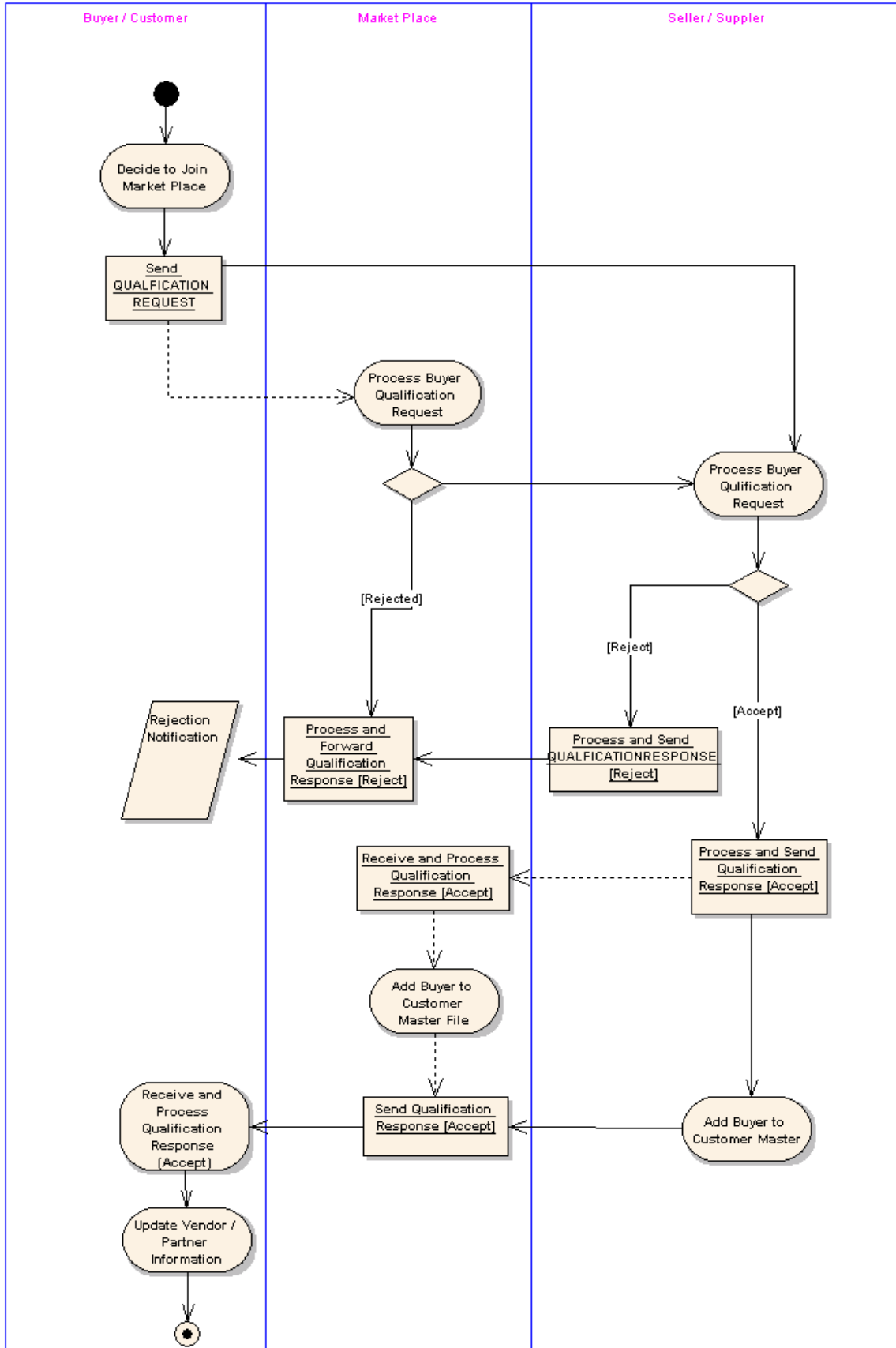


Figure 4.2.3.a: Customer Registration with an Existing Contract

Existing Contracts refers to a Buyer that has a pre-existing business relationship with a Seller, which is typically characterized by a contract arrangement or purchase agreement between the Buyer and Seller. If a Buyer, during the Marketplace Registration process, chooses to provide information to the Marketplace regarding its current business relationships with registered Sellers (i.e., D-U-N-S Number, Company Names, or Contract Numbers), the Marketplace transmits a Qualification Request to each of the registered Sellers requesting a response from the Seller indicating whether or not the Seller is willing to do business with the Buyer via the Marketplace. The Qualification Request includes the following information:

- Buyer's unique identification number and Buyer Name
 - Contract Numbers
 - Optional Data Elements (e.g., payment terms.)
- The Qualification Response, which is required from the Seller to whom the Qualification Request was issued, includes the following information:
- Buyer unique identification number and Buyer Name
 - Seller unique identification number and Seller Name
 - Status (e.g., Approved, Denied, etc.)
 - Description of Status

A return status indicating acknowledgment or approval generally allows the Buyer to proceed with a Purchase Order or RFQ with the Seller within the Marketplace, whereas a return status of denied prevents the Buyer from conducting further business with that Seller. Additionally, if the Seller approves a Buyer, then the Buyer may be granted more immediate access to their contract pricing via the Marketplace. In either case, the Marketplace may choose to forward the Qualification Response to the Buyer as a means of notification.

- **Business Scenario 2 – First-Time Purchase Order**

The Business Process Model for First-Time Purchase Order using the Marketplace model is depicted in the following diagram. Solid thick lines illustrate the transaction between the Marketplace and Seller. Dashed thick lines indicate the Buyer to Seller transactions. Solid thin lines illustrate the Buyer to Marketplace transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

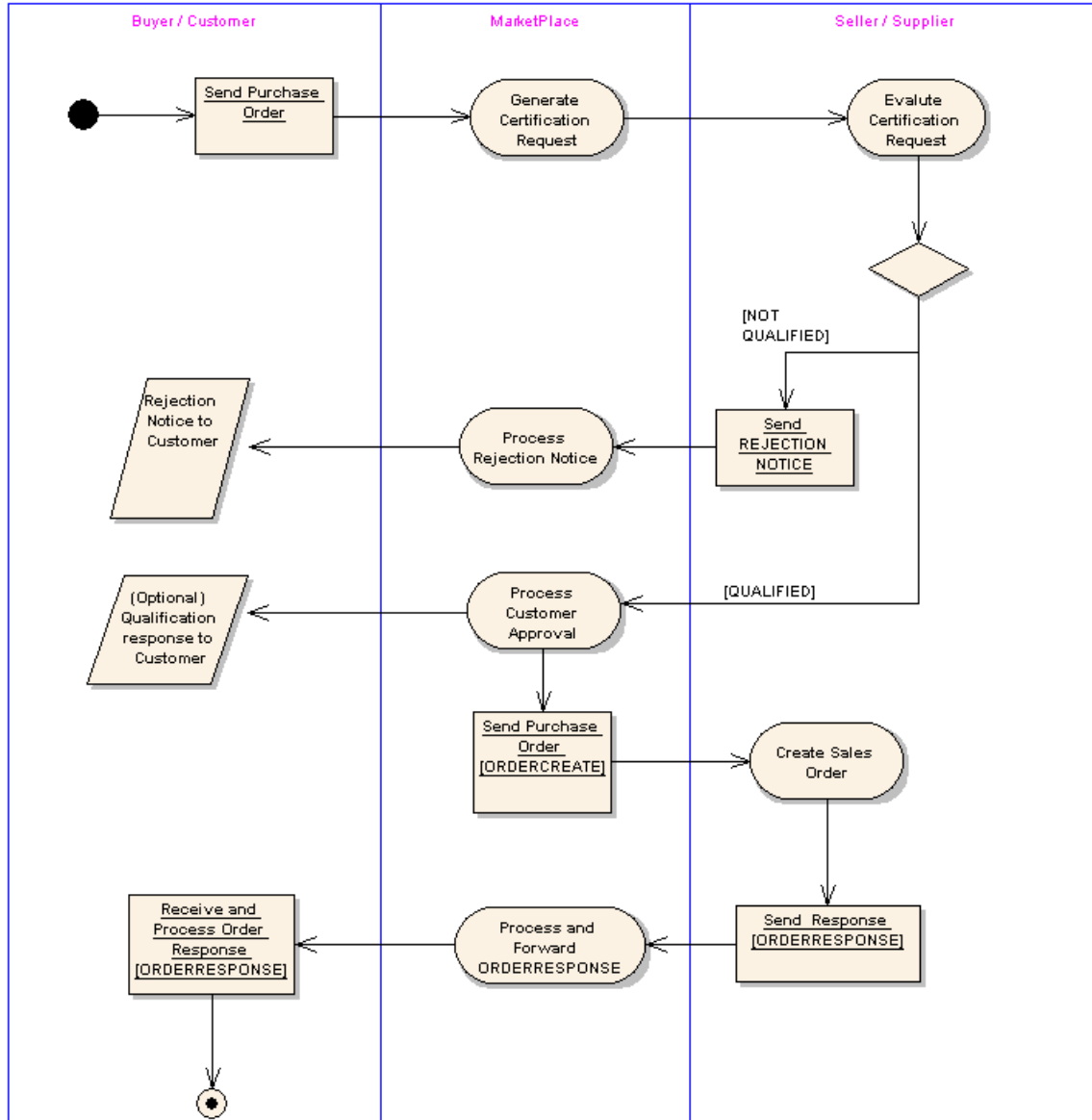


Figure 4.2.3.b: Customer Qualification for a First-Time Purchase Order

First-time Purchase Order refers to a Buyer that has not purchased a product or service via the Marketplace from a given Seller or Sellers. For example, upon browsing the Marketplace's catalog of products and services, a registered Buyer may indicate a desire to purchase a product, potentially at list price, from a given Seller. If the Marketplace determines that the Buyer has not yet been qualified by the Seller to conduct business via the Marketplace, the Marketplace transmits a Qualification Request to the Seller, which gives the Seller an opportunity to evaluate and qualify the potential Buyer. The Seller then returns a Qualification Response to the Marketplace. If the Seller has acknowledged or approved the Buyer, the Marketplace generally proceeds with the Purchase Order. Finally, the Marketplace may choose to forward the Qualification Response to the Buyer in question as a means of notification.

- **Business Scenario 3 – First-Time RFQ**

The Business Process Model for “First-Time RFQ” using the Marketplace model is depicted in the following diagram. Solid thick lines illustrate the transaction between the Marketplace and Seller. Dashed thick lines indicate the Buyer to Seller transactions. Solid thin lines illustrate the Buyer to Marketplace transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

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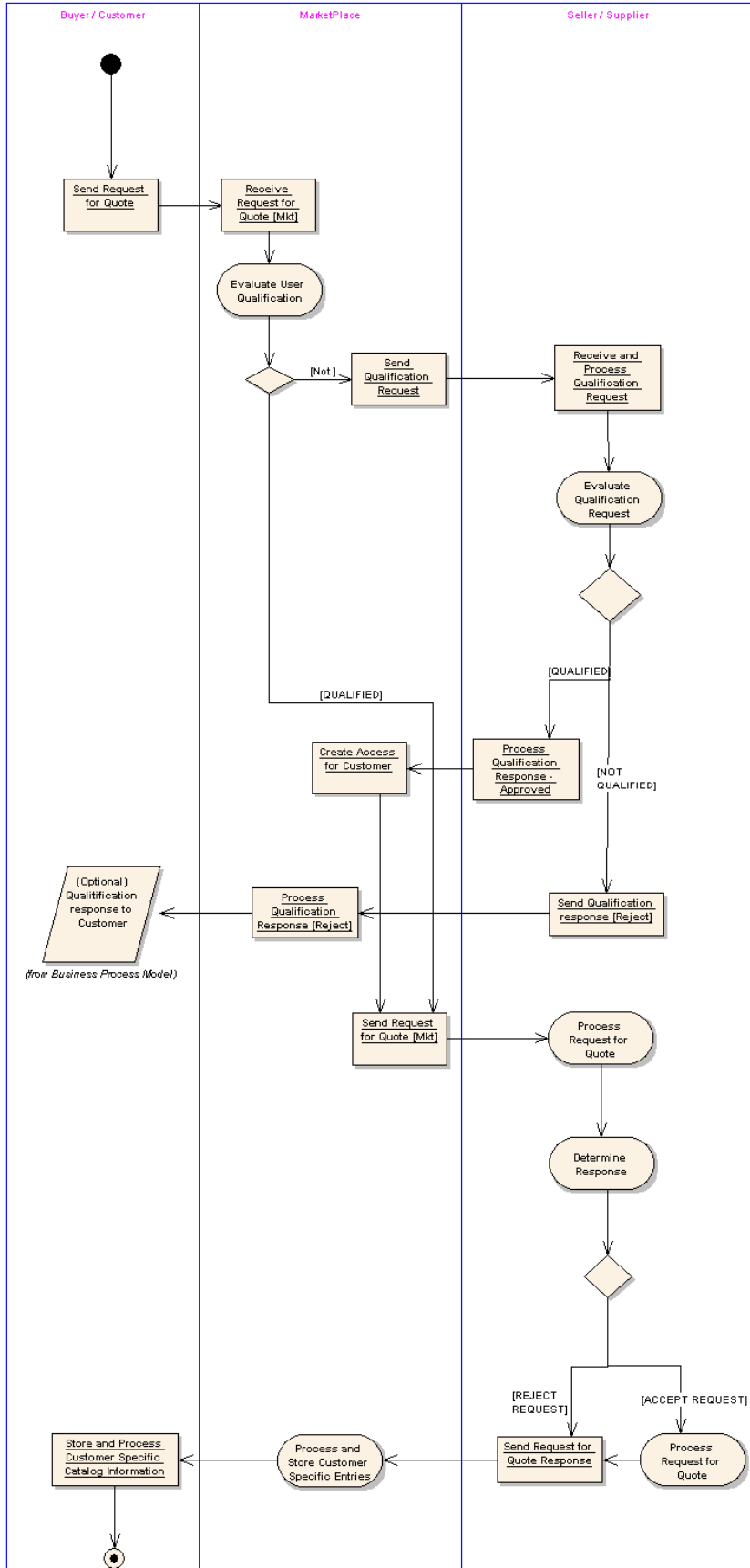


Figure 4.2.3.c: Customer Qualification for a First-Time RFQ

First-time RFQ refers to a Buyer who has not previously submitted a request for quote (RFQ) via the Marketplace to a given Seller. For example, upon browsing the Marketplace's catalog of products and services, a registered Buyer may desire to purchase a product from a given Seller, but not at the list price included in the on-line catalog. If the Marketplace determines that the Buyer has not yet been qualified by the Seller to conduct business via the Marketplace, the Marketplace transmits a Qualification Request to the Seller, which gives the Seller an opportunity to evaluate and qualify the potential Buyer. The Seller then returns a Qualification Response to the Marketplace. If the Seller has acknowledged or approved the Buyer, the Marketplace generally proceeds with the Transmit RFQ transaction. Finally, the Marketplace may choose to forward the Qualification Response to the Buyer in question as a means of notification.

Note: It is reasonable to assume that a Buyer need not be qualified for both the First-time RFQ and the First-time Purchase Order scenarios (i.e., the Buyer Qualification process between a given Seller and Buyer should occur only once).

4.3 Qualification Request

The Qualification Request transaction functions as the notice to the Seller that a registered Buyer is requesting purchasing access through the Marketplace. Data elements of a basic customer registration record are included in this message. The data model and example markup for the Qualification Request are documented below:

4.3.1 Qualification Request Data Models & Structures

The following tables illustrate the data elements and structures for the Qualification Request transaction:

| Element Name | E/S | Description |
|--------------------------------|-----|--|
| QualificationRequest | (S) | Root level element for the Qualification Request transaction. |
| Header | (S) | Standard Header found in all CIDX messages. |
| QualificationRequestBody | (S) | Structure that contains the qualification information for this message. |
| QualificationRequestProperties | (S) | Structure that contains information about the marketplace and this request. |
| QualificationRequestPartners | (S) | Structure that defines the trading partners involved in this transaction |
| QualificationRequestDetails | (S) | Structure that further defines the details about the qualification of the buyer. |

QualificationRequestProperties

The QualificationRequestProperties structure contains only basic information about the Buyer such as Language and Currency.

| Element Name | E/S | Description |
|------------------------|-----|---|
| LanguageCode | (E) | The default language used by the Buyer for transactions. Attribute: Domain - Identifies external list of language codes. |
| CurrencyCode | (E) | The default currency used by the Buyer, which can be stored in the customer master of the Seller. Attribute: Domain - Identifies external list of currency codes. |
| MarketPlaceInformation | (S) | Structure to identify the internal information and references of an exchange inside the marketplace. See Common Data Elements for a description of MarketPlaceInformation. |

QualificationRequestPartners

The QualificationRequestPartners structure identifies the Buyer, the Seller doing the qualification, and other partners of the Buyer that may be useful in determining qualification status.

See Section 3 - Common Data Elements for a description of the PartnerInformation structure.

| Element Name | E/S | Description |
|--------------|-----|--|
| Buyer | (S) | Identifies the trading partner to be qualified as the Buyer of goods through the MarketPlace. Uses the PartnerInformation structure. |
| Seller | (S) | Identifies the trading partner that is the Qualifying party. Uses the PartnerInformation structure. |
| ShipTo | (S) | Identifies the trading partner to whom the products will be shipped. Ship to addresses may be important for the Seller, as they may affect the qualification Uses the PartnerInformation structure and Unloading Point, which specifies the location where the products will be delivered. |
| Payer | (S) | Identifies the trading partner who will pay for the products, if different from the Buyer. Uses the PartnerInformation structure and supplies that partner's account information. |
| OtherPartner | (S) | Identifies any other trading partner that may be a part of the transaction. Uses the PartnerInformation structure. Attribute: PartnerRole - Identifies the role of the partner. |

QualificationRequestDetails

The QualificationRequestDetails structure contains details about the Buyer that the Seller can use to help determine qualification status.

| Element Name | E/S | Description |
|---|-----|---|
| BuyerReference | (S) | Information supplied by the buyer about existing contracts, previous agreements, or other reference documents. |
| PaymentTerms | (S) | Terms of monetary settlement for a sale or other transaction. See Section 3 – Common Data Elements for a description of the Payment Terms structure. |
| PaymentMethodCode | (E) | Defines the method of payment for goods and services. Use the RosettaNet GlobalPaymentMethodCode list. |
| InvoicePreference | (S) | Structure that identifies delivery and timing options of the invoice that specify how/when the invoice needs to be sent. |
| CountryOfFinalDestinationCode | (E) | Code that identifies the country where the product will be ultimately delivered. Attribute: Domain - Identifies external list of country codes. |
| StandardIndustrialClassification Number | (E) | Number indicating the type of industry a given partner is in. |
| NAICSNumber | (E) | Identifier assigned by NAICS for a qualification transaction. |
| AccountInformation | (S) | Identifies the account to be used for financial settlement. See Section 3 – Common Data Elements for a description of the AccountInformation structure. |

InvoicePreference

| Element Name | E/S | Description |
|---------------------------|-----|--|
| InvoiceMode | (E) | Identification of the method by which a customer wishes to be invoiced. |
| BillingScheduleIdentifier | (E) | Identification of the calendar that determines the schedule of billing dates for the customer. |

4.4 Qualification Response

The Qualification Response transaction functions as the notice to the Marketplace that the registered Buyer is either acknowledged, approved, or denied purchasing access to the Seller through the Marketplace.

4.4.1 Qualification Response Data Models & Structures

The following tables illustrate the data elements and structures for the QualificationResponse transaction:

| Element Name | E/S | Description |
|---------------------------------|-----|--|
| QualificationResponse | (S) | Root level element for the QualificationResponse transaction. |
| Header | (S) | Standard Header found in all CIDX messages. |
| QualificationResponseBody | (S) | Structure that contains the response information. |
| QualificationResponseProperties | (S) | Structure that contains information about the marketplace and language used in this transaction. |
| QualificationResponsePartners | (S) | Structure that defines the trading partners involved in this transaction |
| QualificationResponseDetails | (S) | Structure that defines the status of the qualification. |

QualificationResponseProperties

| Element Name | E/S | Description |
|------------------------|-----|--|
| LanguageCode | (E) | The language used in the Description field (in the Details section of the message). Attribute: Domain - Identifies external list of language codes. |
| MarketPlaceInformation | (S) | Structure used to identify the internal information and references for an exchange that takes place via the marketplace. See Section 3 - Common Data Elements for a description of the MarketPlaceInformation structure. |

QualificationResponsePartners

The QualificationResponsePartners section identifies the Buyer, Seller, and SoldTo parties.

See Section 3 - Common Data Elements for a description of the PartnerInformation structure.

| Element Name | E/S | Description |
|--------------|-----|--|
| Buyer | (S) | Identifies the trading partner to be qualified as the Buyer of goods through the MarketPlace. If the Buyer is not the same as the SoldTo, then it is not the Buyer who should be evaluated for qualification, but the SoldTo. Uses the PartnerInformation structure. |
| Seller | (S) | Identifies the trading partner who determines the qualification. Uses the PartnerInformation structure. |

| | | |
|--------------|-----|---|
| SoldTo | (S) | Identifies the trading partner to be qualified if the Buyer is not the same as the SoldTo. In this scenario, the Seller would qualify the SoldTo. Uses the PartnerInformation structure. |
| OtherPartner | (S) | Identifies any other trading partner that may be a part of the transaction. Uses the PartnerInformation structure. Attribute: PartnerRole - Identifies the role of the partner. |

QualificationResponseDetails

The QualificationResponseDetails provides the Marketplace with the results of the Buyer's qualification from the Seller.

| Element Name | E/S | Description |
|--------------------------------|-----|--|
| CountryOfFinalDestinationCode | (E) | Country/countries for which the Seller has qualified the Buyer/SoldTo to sell the product to. Attribute: Domain - Identifies external list of country codes. |
| QualificationStatusInformation | (S) | Structure that contains information about the status or response to the qualification request. |

QualificationStatusInformation

The QualificationStatusInformation provides the Marketplace with the status of the Buyer's

| Element Name | E/S | Description |
|---------------------|-----|---|
| QualificationStatus | (E) | Code indicating that the Buyer was qualified or the reason for rejection. |
| Description | (E) | Description of why qualification was accepted/rejected. |