



Healthcare Consignment Inventory

Business Process Flow

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Document Summary

Document Item	Current Value
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Document Description	Canadian healthcare consignment inventory process mapping process provides information on the future “to be” leading practice for managing consignment inventory for order to cash and includes using EDI.

Document Change History Summary

Date of Change	Version	Changed By	Reason for Change	Summary of Change
May 2012	1.0	Rita Laur	Final Document	Version 1.0 Final Document Published
February 2020	1.1	Rita Laur & Nicole Golestani	Updates applied	<ol style="list-style-type: none"> Version 1.1 minor date and version updates. Added GS1 Canada Contact information and links for work request submissions for updates which may be identified by users.

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Initial Content Developers

Company	Representative	Title
Alcon Canada	Roy James	VP, Operations
Alberta Health Services	Jim Rhodes	Functional Specialist, Procure to Pay E-business platform
Boston Scientific	Lisa Wells	Field Operations Manager
Centre Hospitalier Universitaire de Québec (CHUQ)	Eric Blanchette-Ouellet	Administrative Process Analyst
Edwards Lifesciences	Lise Bishara	Customer Service Supervisor
FacilicorpNB	Janluc Gagne	Purchasing Manager
GHX Canada	Morgan McNichol	Alliances & Key Accounts Director
Grey Bruce Health Services	Linda Mueller	Supply Chain Manager
Johnson & Johnson Medical	Fabio Carvalho	Team Leader, Inventory Planning
Logi-D	Jonathan Assouline	IT & R&D Director
Ormed Information Systems	Gerald LePage	Product Specialist Lead
PROcure Healthcare	Becky Stevens	Perioperative Material Manager
Sorin Group Canada	Matthew Ralph	Sales & Marketing Coordinator
St. Michaels Hospital	Michelle Enright	Information & Communication Technology Services (ICT)
SSW	Debbie Franzoi	Senior Buyer
Vancouver Coastal Health	Carol Gill	Ecommerce Coordinator
Zimmer of Canada Limited	Barbara Bloomfield	Customer Service Representative
GS1 Canada	Rita Laur	Director Standards
GS1 Canada	Herb Martin	Director, Healthcare
GS1 Canada	Bob Fletcher	Special Projects Consultant
GS1 Canada	Neil McPhedran	Special Projects Consultant
GS1 Canada	Nicole Golestani	Implementation Manager
GS1 US	Steve Rosenberg	Director, Ecommerce

* Co-Chairs (none)

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Executive Summary

The Canadian Healthcare Consignment Inventory Business Process Task Group is a collaborative team led by the GS1 Canada Healthcare Sector Board, in collaboration with the Canadian Healthcare Technical Standards Work Group. A key requirement of this task group is to drive national adoption of consistent, supply chain standards to enable electronic procurement, interoperability and traceability across the sector. The project aims to enable suppliers and providers with the standardized business processes and to exchange accurate information using EDI (Electronic Data Interchange).

The Call to Action aimed to assemble subject matter experts, their business and technical expertise, commitment and contributions to advance the task group's objective of continuing the development of supply chain standards for local technical, consignment inventory process and encoded data requirements within the Canadian healthcare supply chain.

The project's efforts address the need to further support accurate data and improve efficiencies of the procurement process. The use of standardized mapping process for establishing consignment inventory products (trade items) ordering, identifying procurement steps – purchase orders containing consignment products and updating existing information when product has been consumed/used and informing the supplier to trigger the invoice for payment and replenish (if requested) the used consignment product. This will further improve communications between all parties.

This Task Group is the result of Canadian industry's recognition that currently, there is no industry standard regarding the consignment inventory business process, specifically in relation to the replenishment of the consigned product process management. As per industry's request, the task group created this document of common policies and procedures.

The Task Group is committed to identifying, analyzing and documenting consignment inventory business processes in order to develop electronic technical solutions. Work directives have been identified by the members of the Canadian Healthcare Technical Standards Work Group and a GS1 Canada Change Request has been submitted. Once approved, this Change Request will be presented to the Canadian Healthcare Technical Standards Work Group's leadership. The Task Group will complete the requirements and report back.

Mission

The mission of the Canadian Healthcare Consignment Inventory Business Process Task Group is to develop a future business process to manage consignment inventory within the Canadian healthcare supply chain by mapping the healthcare consignment inventory process through the healthcare supply chain; to identify, analyze and document consignment inventory business processes and requirements in order to ascertain appropriate standardized technical Electronic Data Interchange (EDI) business requirements to be published in the Canadian Healthcare EDI Implementation Guidelines. The focus is on the initial consignment inventory contract, consumption/usage of product, billing of used product, replenishment of the used product, and payment management.

Scope

This task group will operate within the following context:

- All business applications and business processes related to healthcare consignment inventory.
- Collect, define and evaluate consignment inventory business processes.
- Document the flow, business rational and rules related to the management of consignment inventory.
- Determine how current and/or revised business processes impact electronic communication requirements
- Provide a standardized electronic communication implementation guideline.

These standards are for national requirements, ensuring alignment with North American and global standards where applicable.

Out of Scope

- Exchange products such as expired product.

Key Requirement

The key requirement for this guideline is to identify the future consignment inventory management process which will include the communication of data via EDI.

Identify the changes that will need to be adopted by the healthcare users to ensure efficient and effective management of consignment inventory.

KEY PRINCIPALS

1. Consignment Inventory and Regular Inventory may ***NEVER*** be ordered on the same purchase order
2. Consignment Inventory Purchase Orders must be separate
 - a. the “bill only (Charge)” means invoice only
 - b. the “bill and replace (Replace)” means to invoice and send new product
 - c. NO MIXED consignment inventory Purchase Orders permitted only

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The Healthcare Consignment Inventory Business Process

Consignment – High-value, critical medical devices (mostly implants and related instruments) provided by the supplier at no charge until either used or otherwise billable in accordance with the consignment agreement terms between the provider and vendor.

Due to cost constraints providers (hospitals) utilize a consignment option with their vendor partners to ensure that the correct product for the right patient is available for use. Pre-purchasing of medical devices puts the hospital at risk of a financial loss due to product expiration, and potentially limits providers in providing evidence based care through improved technologies and design.

Currently there is no consistency in how providers send in their billings and replenishments for their consigned products. There is a need for a best practice solution whereby orders are clear as to whether they are billings and replenishments or just bill only. It often happens that bill only orders are placed without indication causing product to be replenished to the provider in error. This adds to the time and cost for both the provider and supplier.

How to read the document:

Each Process step has a set of swim lanes. An identifier such as  provides reference to other processes on subsequent pages

The Process

Enclosed are Swim lane process flows on Consignment Stock. There are 7 swim lanes:

- A. Supplier Customer Service Personnel
- B. Supplier ERP System Functions
- C. Provider Material Management Personnel
- D. Provider ERP System Functions
- E. Provider Clinical Management Personnel
- F. Provider Clinical Management System Functions
- G. Community Consignment Solution

Additionally, there are 6 specific business processes covered:

- 1. Replenishment Process
- 2. Item Level Receiving
- 3. Clinical Put Away
- 4. Consignment Item Consumption
- 5. Bill and Replace Consignment Item
- 6. Bill Only

The swim lane definitions:

1. **Supplier Customer Service** – Represents the product supplier’s personnel that would manage the consignment supply chain functions to the providers
2. **Supplier ERP System** – Represents the Supplier technology that manages the supply chain functions on the consignment process
3. **Provider Material Management** – Represents the Provider personnel that manages the supply chain replenishment process from the Suppliers
4. **Provider ERP System** – Represents the technology the provider uses to manage the replenishment request and receipt of consumed stock
5. **Provider Clinical Management** – Represents the OR and Clinical area personnel that manage the receipt and consumption of consignment material
6. **Provider Clinical Systems** – Represent the technology used in managing the inventory of consignment stock from receipt through to consumption.
7. **Community Consignment System** – Represents potential solutions that would assist in enabling Best Practices where existing systems cannot meet the requirements. These may include but are not limited to Point Of Use (POU) systems, Cart Management systems and external Clinical Management systems

To properly understand the proposed business process overview, each action has been numbered and a brief explanation provided.

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Section “A” Start and Replenishment Process (Figure 1)

PROVIDER Material Management, ERP System, SUPPLIER ERP System and Supplier Customer Service

1. To commence a consignment process an initial electronic stocking order is required.
- ✓ **Note:** Consignment items must be on a separate purchase order from non-consignment items. **DO NOT MIX**
2. The initial consignment order is transmitted to the supplier
3. The supplier receives and processes the purchase order
4. Supplier reviews the initial electronic consignment purchase order.
5. At this point the normal replenishment process will take place. It will start with a replenishment notice from consumption (Figure 8 - H see **A**) will generate an ASN to be received to the Provider ERP system
6. Supplier Customer Service creates the inventory fulfillment of the product from the distribution centre to the provider’s location
7. The supplier’s ERP system generates the transfer/fulfillment to their distribution centre.
8. Using a shipping order (940) the Supplier Customer Service processes the transfer.
9. Supplier issues the advance ship notice when shipping the replenishment order to the provider.
10. Provider ERP System receives the ASN and records the inbound inventory as In Transit awaiting confirmation of receipt
- ✓ **Note:** The provider system does not update any financial records in their ERP system for consignment inventory at this time.

Section “B” Replenishment & Item Level Receiving (Figure 2)

SUPPLIER ERP System, PROVIDER Material Management, ERP System, Clinical Management, Clinical System

REPLENISHMENT

- B1. The provider receives the consignment inventory and confirms delivery of the number of boxes received
- B2. Provider ERP System is updated by recording information received on the electronic advance ship notice (EDI 856 ASN)
- B3. The consignment inventory information is updated to the Clinical System.
- B4. Physical consignment inventory is transferred to consignment storage area for verification and reconciliation (detailed check-in)

ITEM LEVEL RECEIVING

- B5. The provider consignment inventory storage area completes a detail check in
- B6. Provider investigates if each consignment inventory item is marked with a barcode

Section “C” Detail Item Level Receiving (Figure 3)

PROVIDER Clinical Management, Clinical System

Products without barcodes

- C1. Manually key in the product to the consignment system or into the Provider ERP System to generate a bar code and attach to product. This bar code will also contain the serial number if present
- C2. Generate a barcode from either the consignment system or into the Provider ERP System
- C3. Attach the barcode to the product

Products with barcodes

- Separate products into sterile and non-sterile. Non-Sterile are consigned implants that cannot be asset tagged due to the fact that they are shipped to the hospital un-sterile and placed into implant trays for sterilization. This is done so that the product can be tracked to a specific patient
- C4. If no sterilization is required go to G
 - C4. If sterilization is required go to H

Section “D” Detail Receiving and Consumption (Clinical Put Away) (Figure 4)

PROVIDER Clinical Management, Clinical System

- D1. Divide items into trays and scan the tray to identify the product and any components.
- D2. Generate a tray label and a cross reference to the components in the tray
- D3. Apply a barcode or RFID tag to the tray.
- D4. Sterilize tray and seal
- D5. Store the tray and record the location in the Provider Clinical System.
- D6. Scan the barcode; match the item to the advance ship notice (ASN) and record item’s storage location (Global Location Number GLN). Proceed to G (Provider recording of consignment inventory)

Section “E” Clinical Put-Away (Figure 5)

PROVIDER Clinical Management, Clinical System, ERP System, SUPPLIER ERP System, Customer Service

- E1. Provider Clinical System records any receiving issues.
- E2. Provider Clinical system sends update receipt acknowledgment advice (861) to the ERP System
- E3. Provider ERP system then creates a new receipt acknowledgment advice (861) and issues a confirmation to the Supplier
- E4. Supplier ERP system processes the receipt acknowledgment advice (861) and holds for internal review
- E5. Supplier receives the “Over, Short and Damage” report. The Supplier Customer Service confirms any changes and performs the inventory transfer.

Section “F” Consignment Item Consumption (Figure 6)

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PROVIDER Clinical Management, Clinical System

- F1. Provider Clinical Resource uses the Consignment system and locates procedures scheduled for the day
- F2. Provider Clinician selects items for the procedure and scans the barcode which updates the clinical system
- F3. The Clinical System then links the product to the procedure.
- F4. The procedure is performed
- F5. Record any consignment stock consumed or other as shown below:
 - Inventory Reconciliation (field counts) (Vendor performed using the Consignment System audit capability)
 - Damaged or Wasted (Provider action)
 - Defective Protect (Vendor)
 - Expiry Management
 - Superseding Product
 - Loaner
 - Kit (product issue)
 - Substitution
 - Patient Tracking
 - Product Recall
- F6. Consignment items are recorded for the patient record, with the Serial # or Lot # if applicable.

Section “G” Consignment Item Consumption with Bill & Replace Consignment Items (Figure 7)

PROVIDER Clinical System, Management and ERP System

Consignment Item Consumption

- G1. Provider Material Management updates the Provider Clinical System with any items that are not consumable (Example: expired, dropped, shrinkage, etc.)
- G2. Provider Clinical Management updates the Provider Clinical System with any items that are not consumable (Example: expired, dropped, etc.)
- G3. Provider Clinical System records wasted (supplier or provider) items. (Example: expired, dropped, shrinkage, etc.)
- G4. The Provider Clinical System generates a daily summary of consumption and wasted items

Bill & Replace Consignment Items

- G5. Provider Clinical system will generate an EDI 852 Product Activity Data summary and sends it to the Provider ERP System
- G6. Provider ERP System receives the EDI 852 Product Activity Data summary and updates the system

Section “H” Bill & Replace and Bill Only Consignment Items (Figure 8)

PROVIDER Clinical Management, ERP System, Material Management & SUPPLIER Customer Service –

- H1. Provider ERP System generates the EDI 850 Purchase Order for the Bill Only transactions and another 850 Bill and Replace Purchase Order for the balance of items to the Supplier ERP System
- H2. Supplier ERP System receives and processes the Bill and Replace Purchase Order
- H3. Supplier Customer Service processes the order to bill and replenish the provider consumed consignment inventory.
- H4. For those suppliers that can receive an EDI 850 Purchase Order for Bill Only items an EDI 850 is sent from the provider
- H5. For those suppliers that cannot receive an EDI 850 Purchase Order for Bill Only Items, the provider will create a manual purchase order for the Supplier to process
- H6. Supplier Customer Service updates the inventory consumed by the Provider and issues an invoice.
- H7. Supplier ERP System is updated with the inventory changes and generates an invoice to the Provider.
- H8. Provider ERP System receives the consignment inventory invoice for processing
- H9. Provider Material Management reconciles each invoice with the appropriate purchase order which identifies the consumed product and pays the invoice.
- H10. Provider ERP System processes the payment and issues an 820 Payment Order / Remittance Advice for funds transfer.
- H11. Supplier ERP System receives and records the 820 Payment Order / Remittance Advice
- H12. Supplier Customer Service confirms receipt of payment.

Section LOANER / KIT Parts Bank for consignment products (Figure 9)

- L/T1. Discussion takes place with the Surgeon /OR and the vendor to determine if a bank / kit can be available on a specific day.
- L/T2. A Requisition is approved for the loaner bank(s) and trays to be brought into the hospital
- L/T3. The Requisition is pulled to a Purchase Order and the Purchase Order number is communicated (not EDI) to the vendor (because of timing EDI is not used). Direct communication is preferred due to the sensitivity of the situation. Requisition line(s) would identify loaner, etc.
- L/T4. The vendor (often the sales representative or courier delivers the loaner banks, etc. to the hospital).
Note: cleaning instructions should be included with an inventory list.
- L/T5. The inventory on the Bank/Kit is validated by the provider staff or vendor that all products are accounted.
- L/T6. Any trays which will be used are sterilized prior to use (as applicable)
- L/T7. The products are used by the Operating Room (OR)
- L/T8. After the surgery the Bank/Kit is checked by the provider staff or vendor for usage.
- L/T9. Any trays which were used would be sterilized and available for return shipment (as arranged).
- L/T10. The products used are then itemized on a new Purchase Order (PO) number to bill for items used – these are not replenished) (pricing will be based on contract agreements)
- L/T11. In order to pay the invoice, when a three way match is required, the receiver will be notified by the OR coordinator to receive the PO lines in the ERP system.
- L/T12. The vendor's invoice would reference the billing PO and once the invoice is received the lines are matched to the PO lines. Assuming there are no discrepancies the invoice will be paid.

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Appendix: Process Mapping

Figure 1 “A” PROVIDER Material Management, ERP System, SUPPLIER ERP System, Customer Service - Start and Replenishment Process

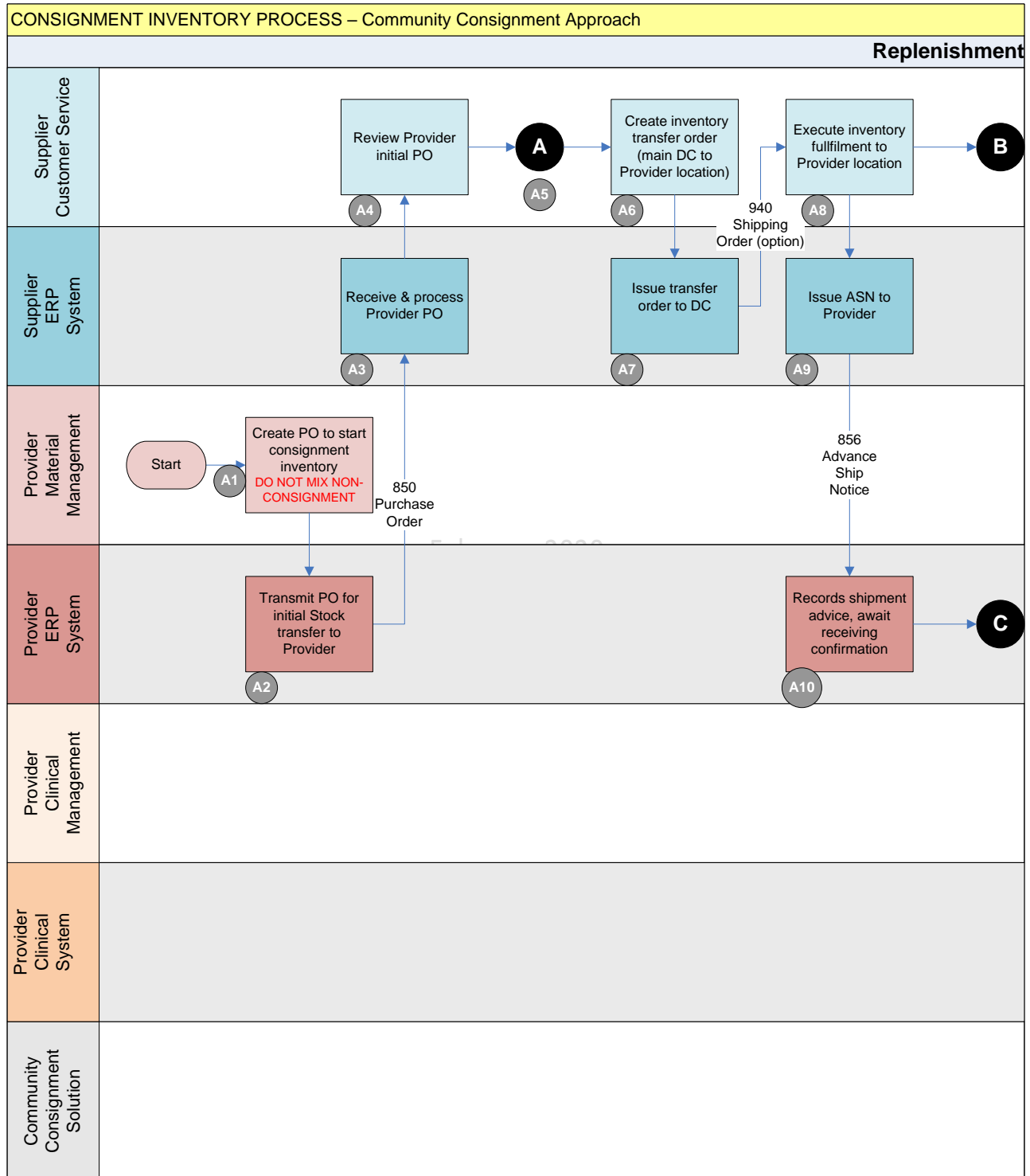


Figure 2 “B” SUPPLIER Customer Service, PROVIDER Material Management, ERP System, Clinical Management, Clinical System – Replenishment & Item Level Receiving

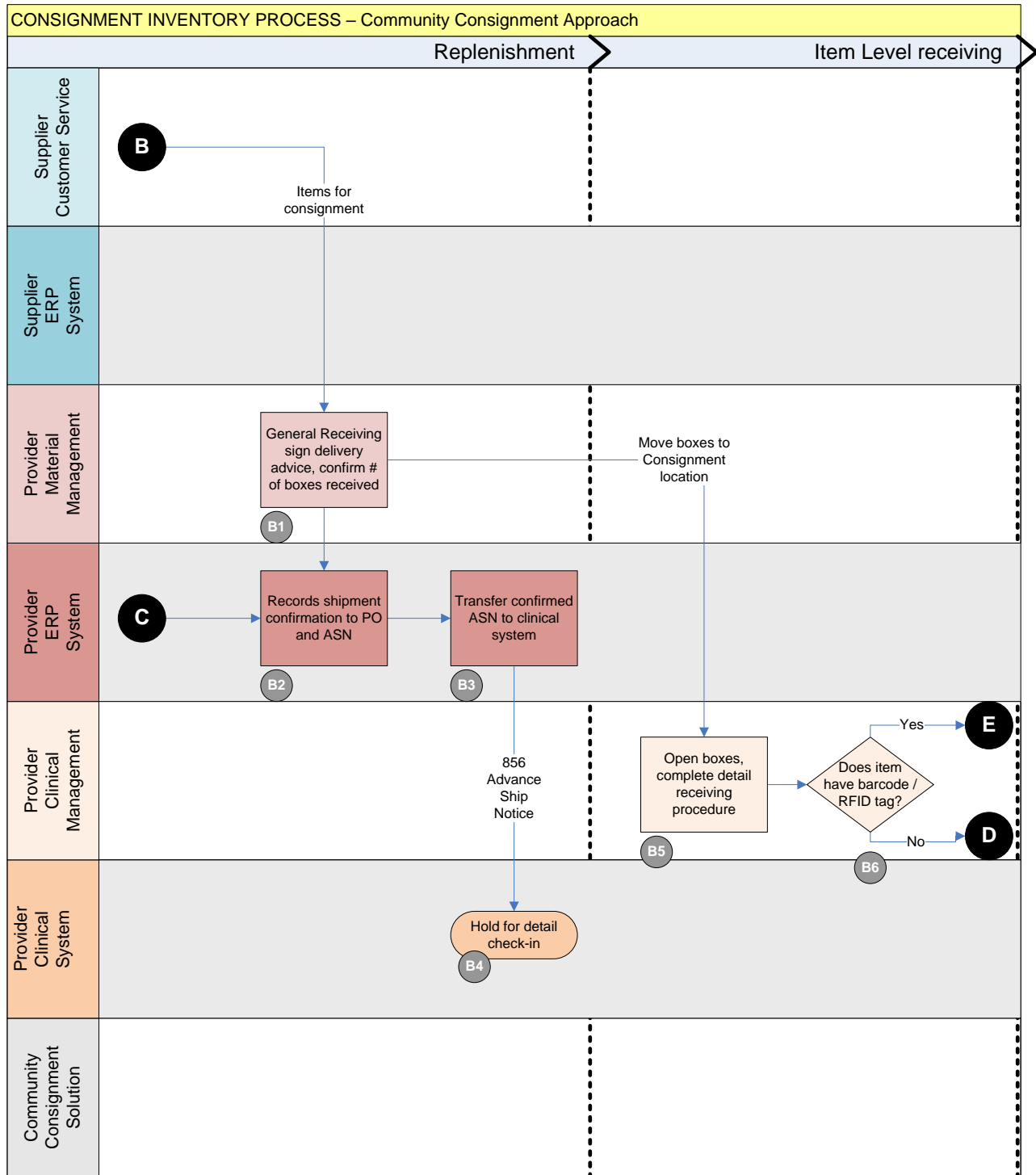


Figure 3 – “C” PROVIDER Clinical System, Clinical Management, ERP System, Material Management -
Detail Item Level Receiving

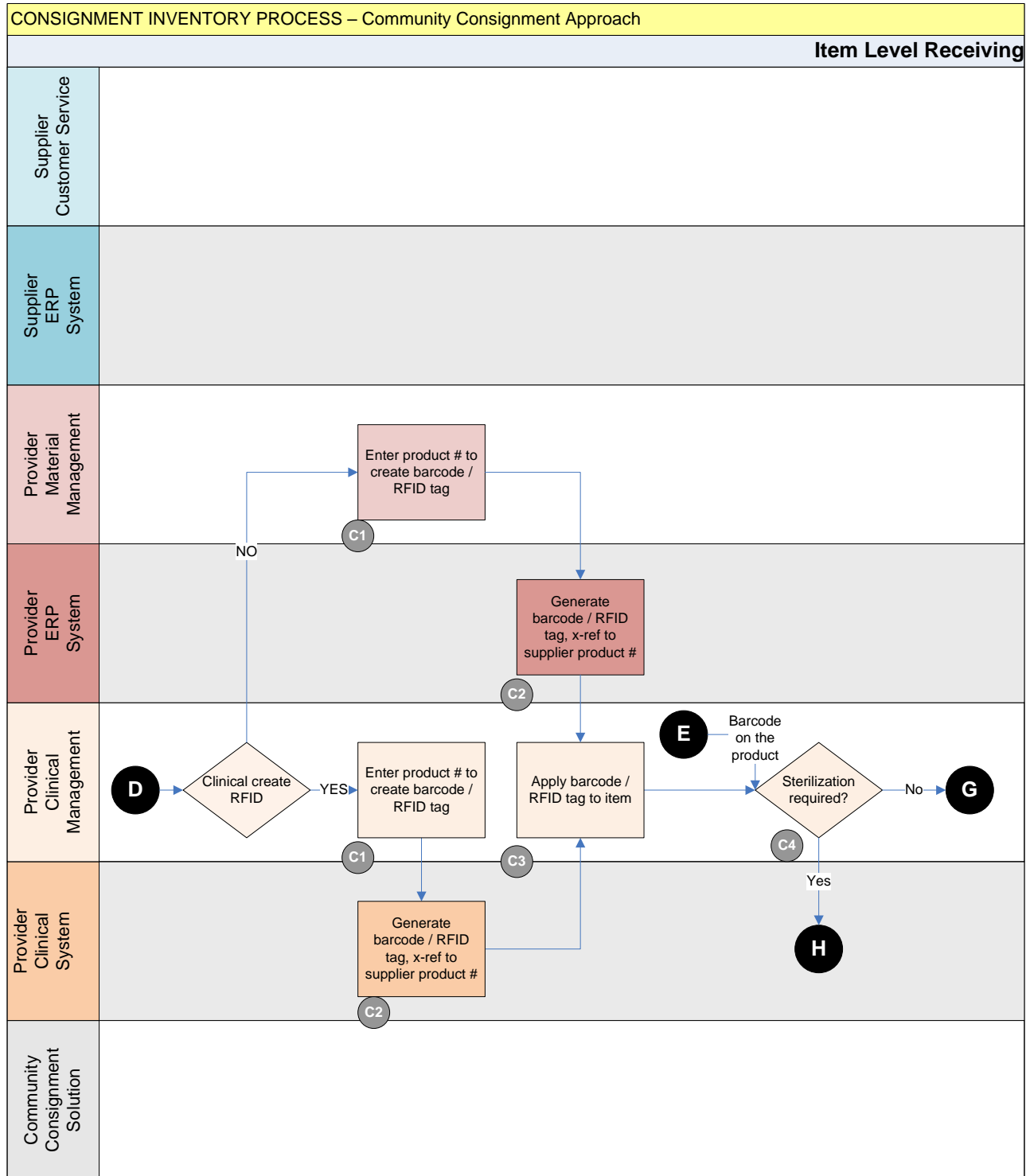


Figure 4 – “D” PROVIDER Clinical Management, Clinical System - Detail Receiving and Consumption (Clinical Put Away)

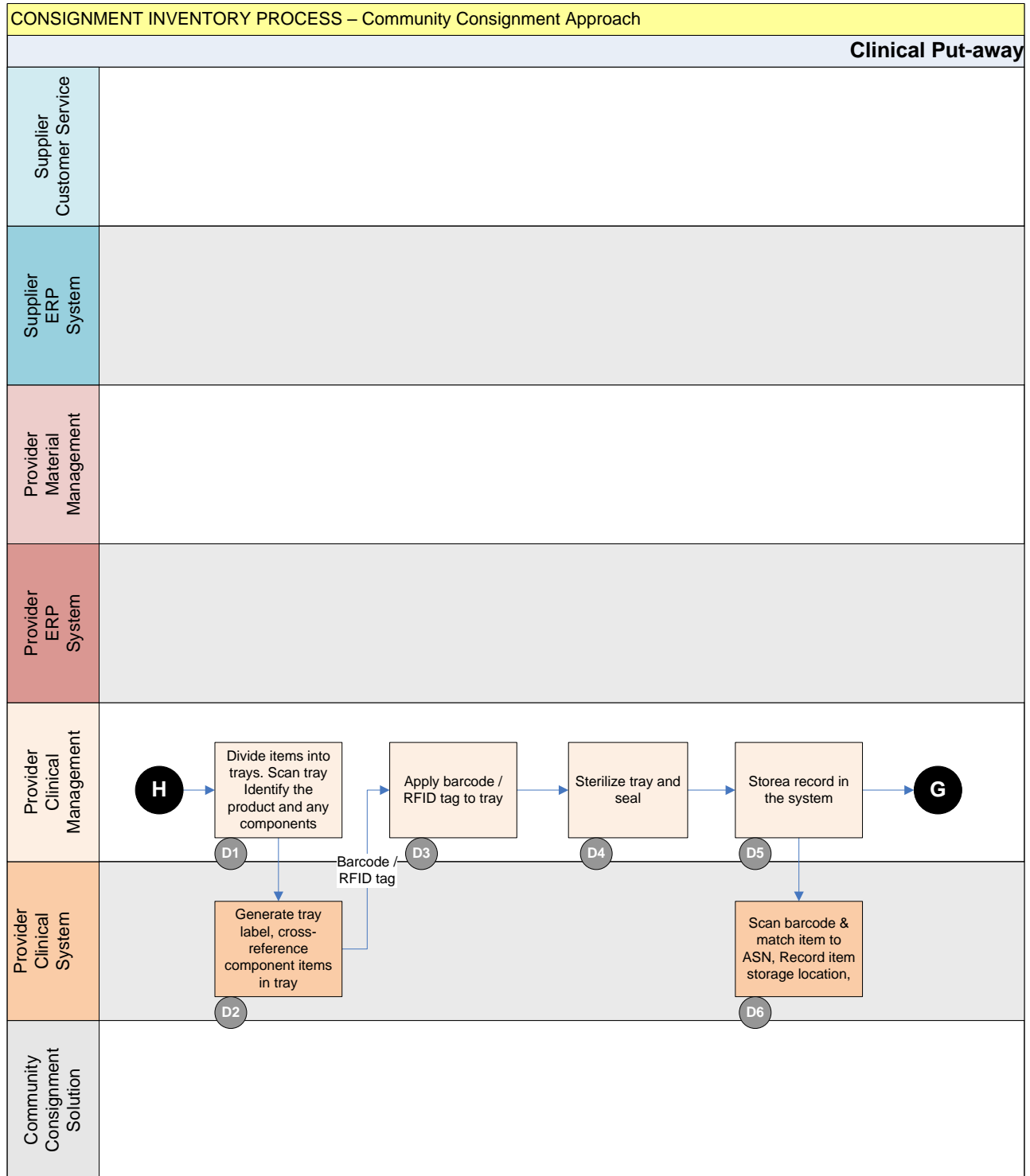


Figure 5 – “E” PROVIDER Clinical Management, Clinical System, ERP System, SUPPLIER ERP System, Customer Service – Clinical Put-Away

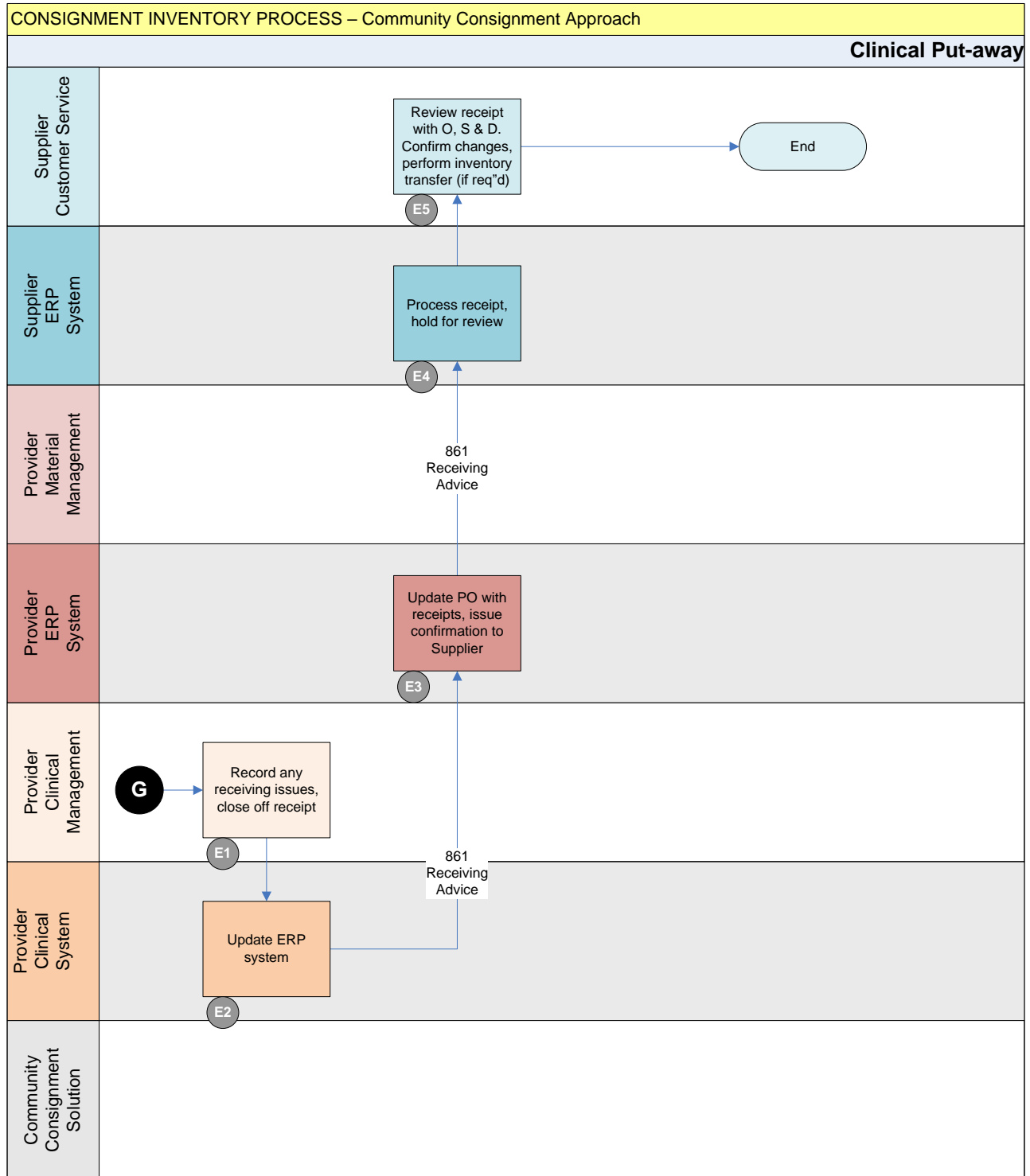


Figure 6 – “F” PROVIDER Clinical Management, Clinical System – Consignment Item Consumption

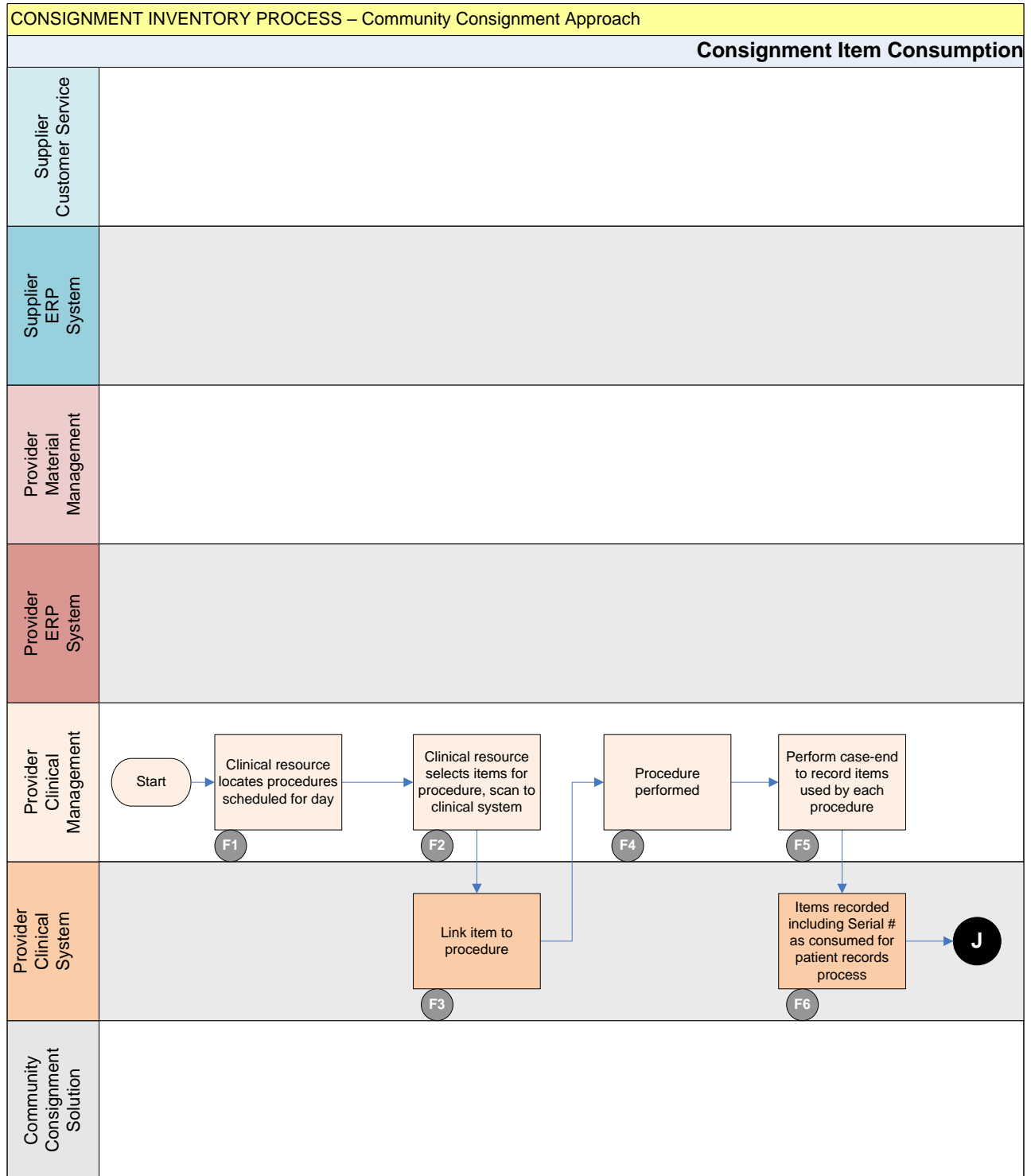


Figure 7 – “G” PROVIDER Clinical System, Clinical Management, ERP System and Material Management – Consignment Item Consumption with Bill & Replace Consignment Items

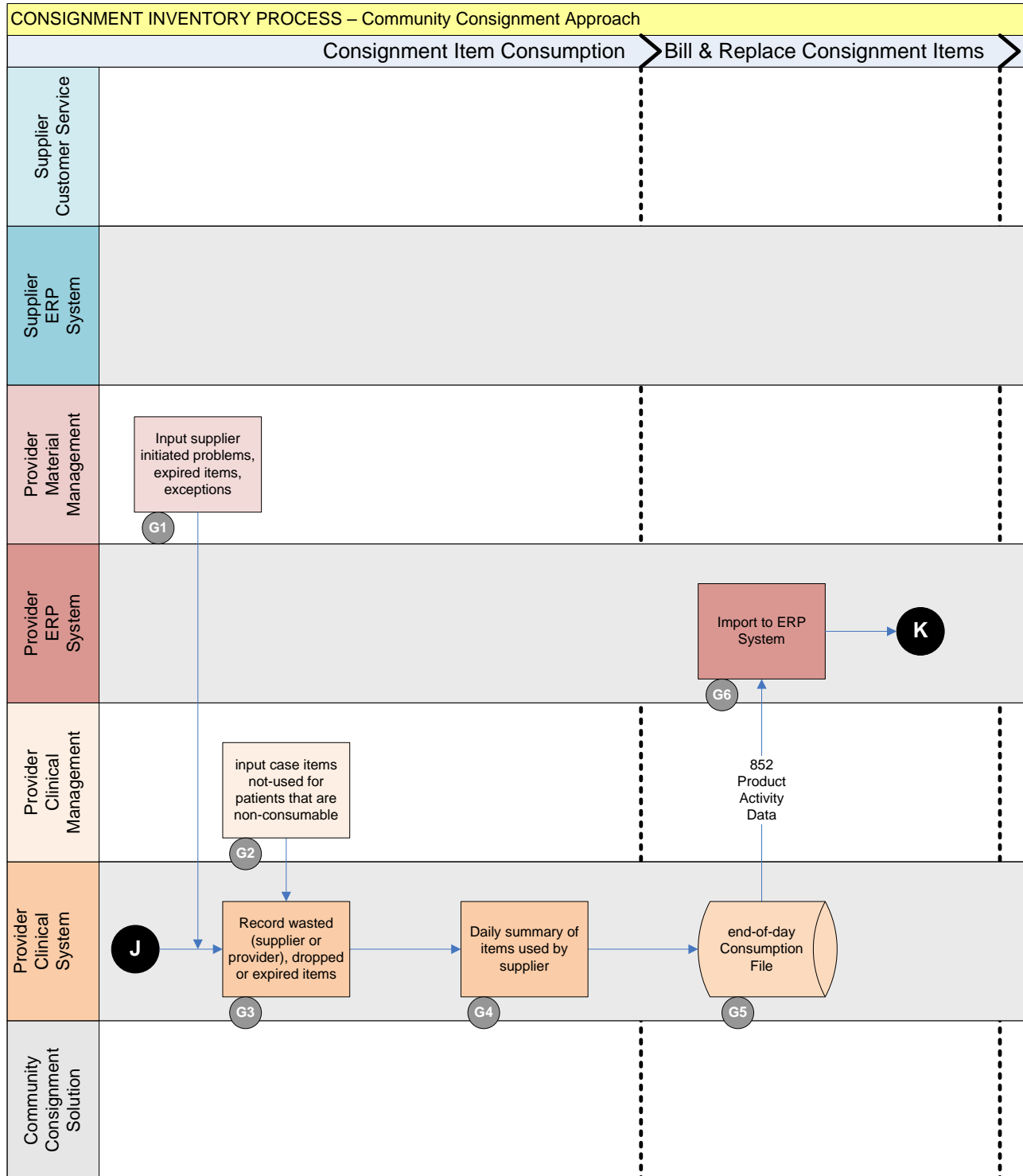


Figure 8 – “H” PROVIDER ERP System, Material Management, SUPPLIER Customer Service and ERP System – Bill & Replace Consignment Items

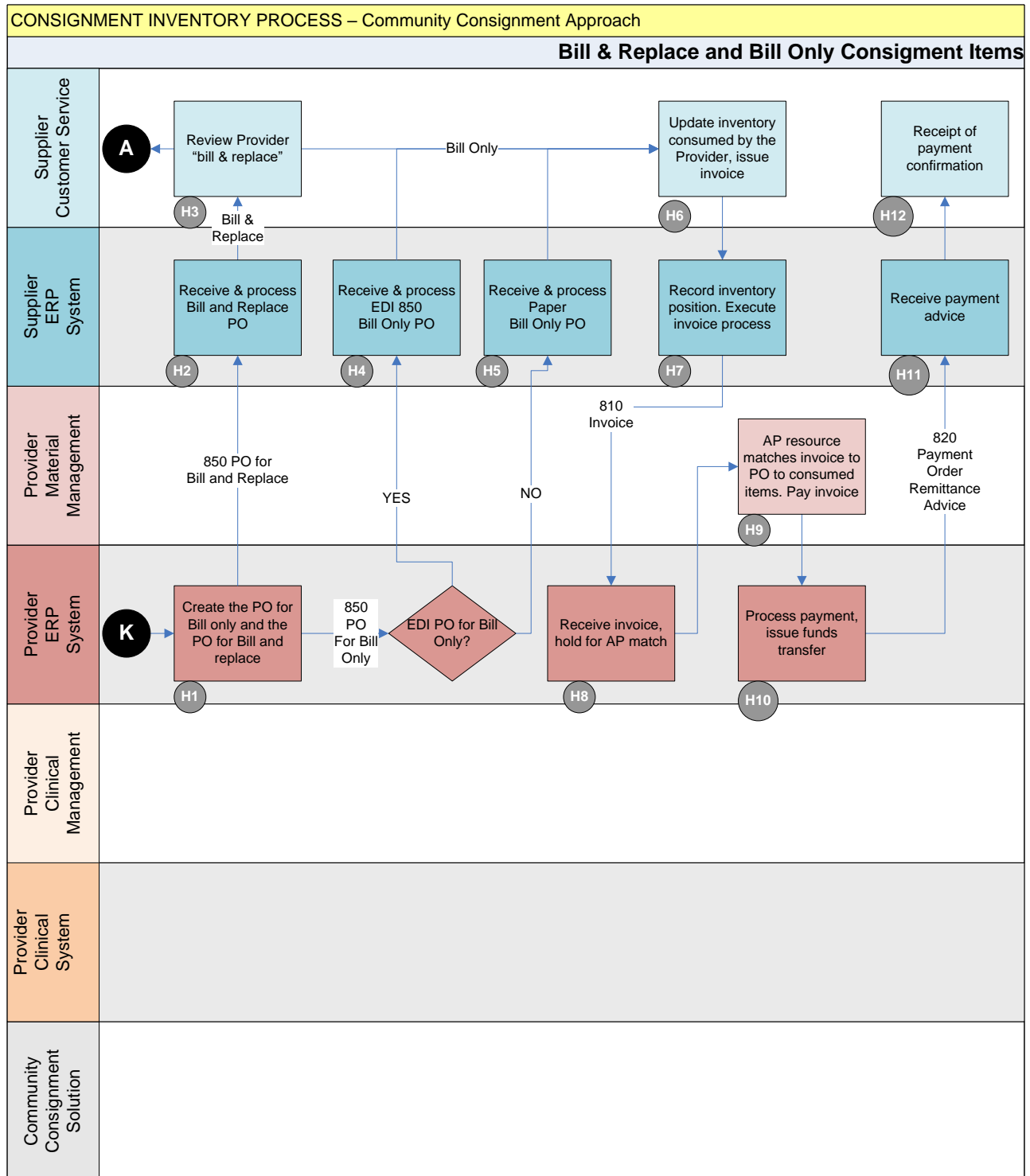
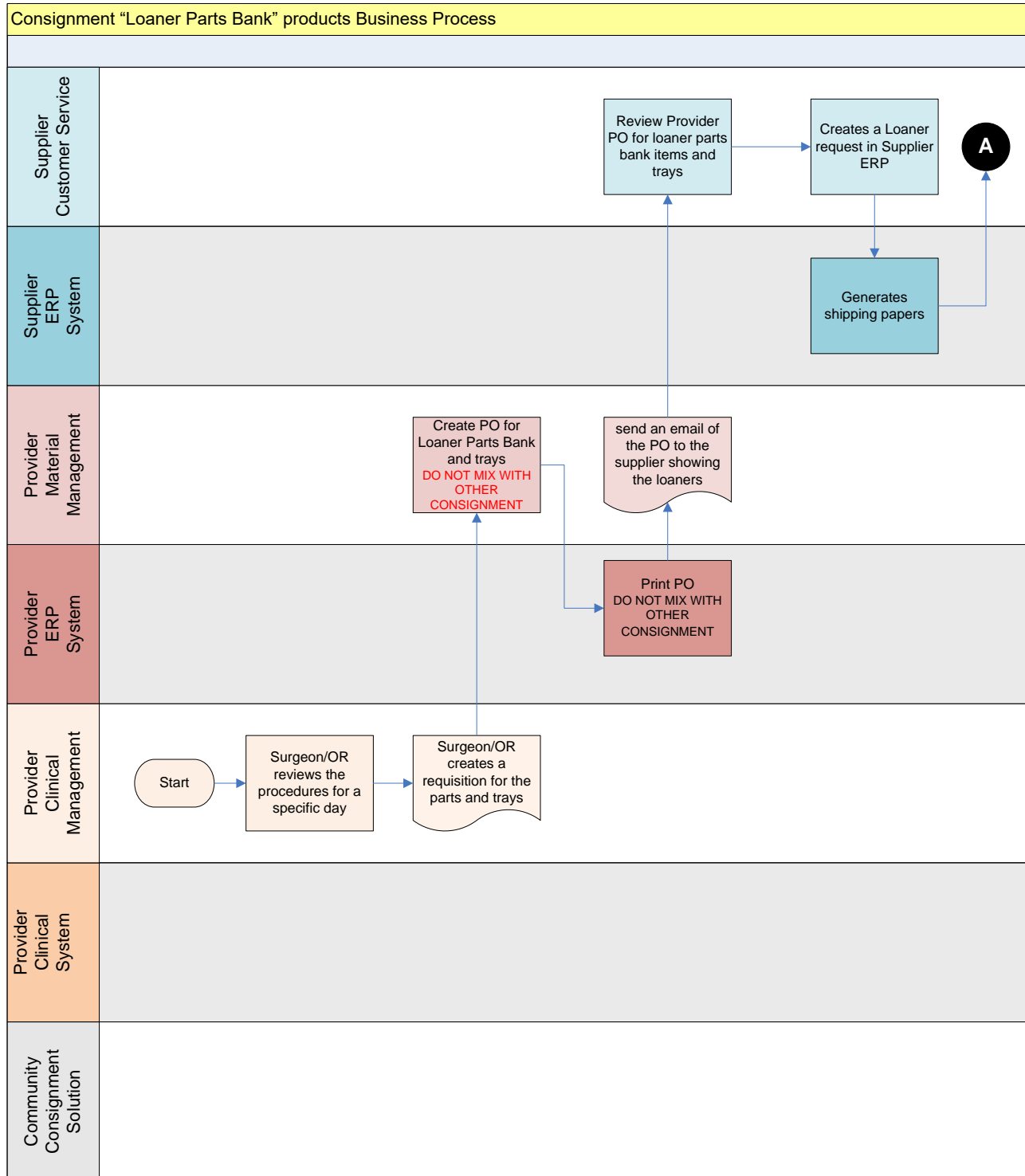
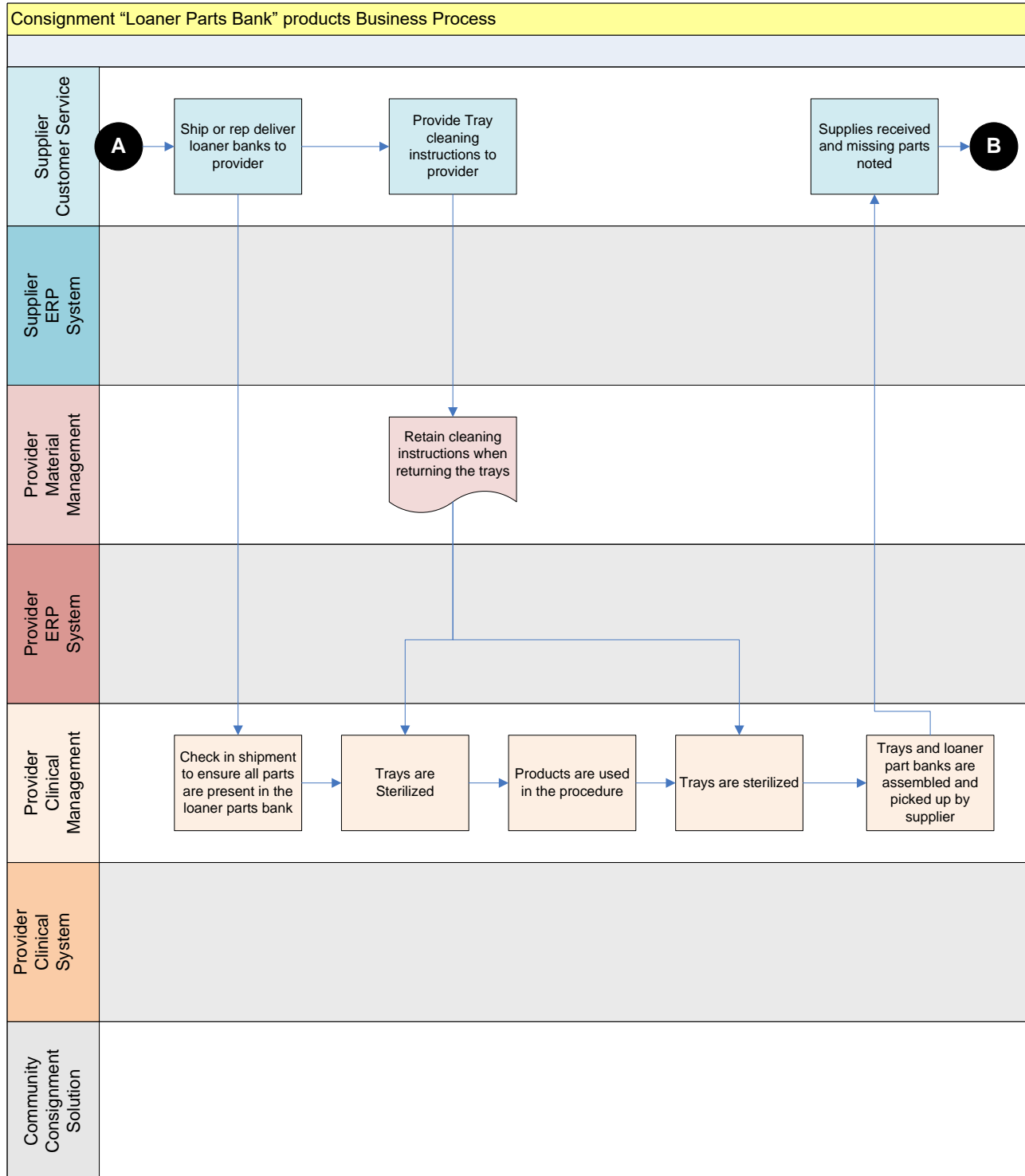


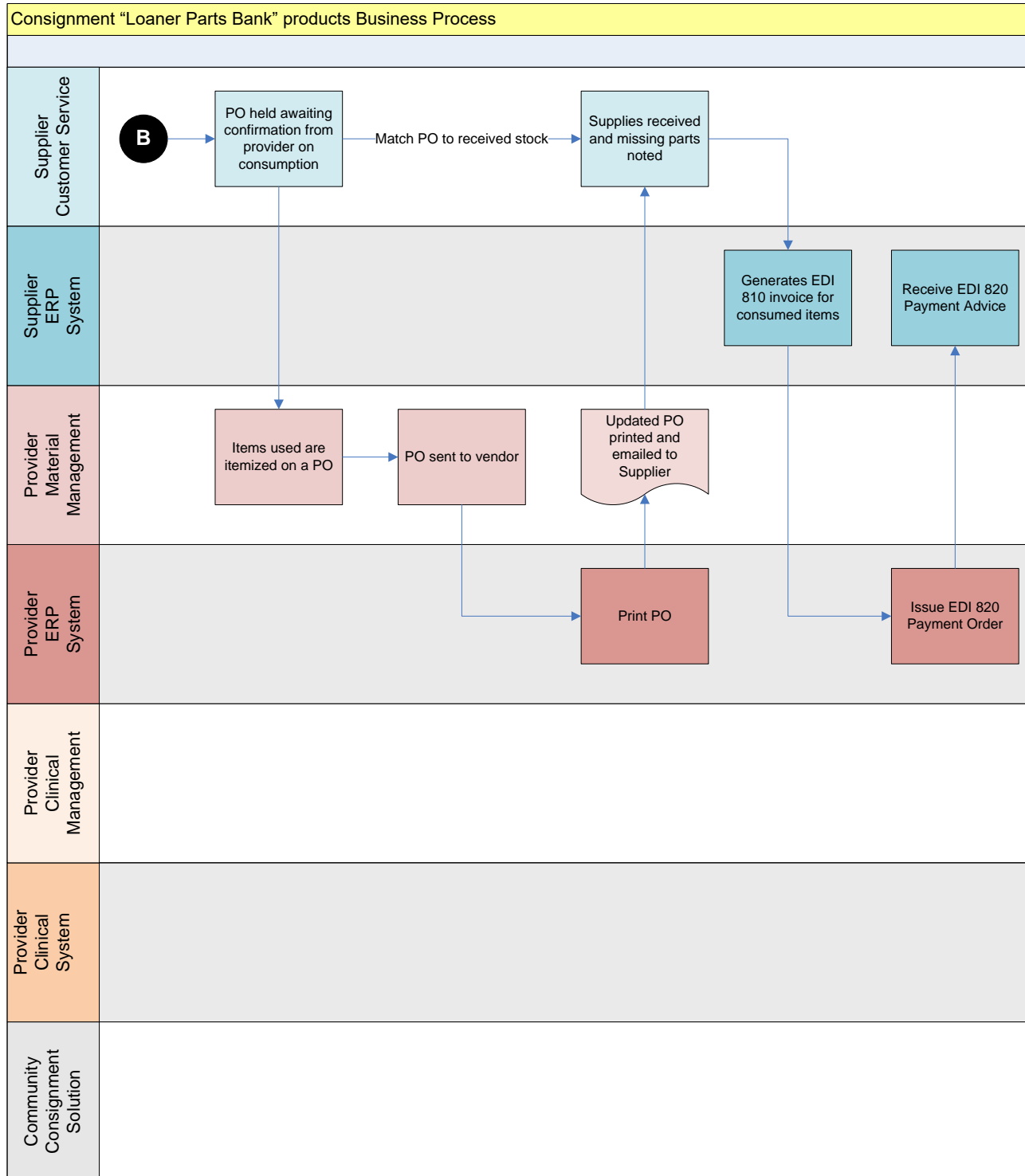
Figure 9-1 - LOANER / KIT Parts Bank for consignment products SUPPLIER Customer Service, ERP System: PROVIDER Material Management, ERP System, Clinical Management



**Figure 9-2 - LOANER / KIT Parts Bank for consignment products SUPPLIER Customer Service: PROVIDER
Material Management, Clinical Management**



**Figure 9-3 - LOANER / KIT Parts Bank for consignment products SUPPLIER Customer Service, ERP System:
PROVIDER Material Management, ERP System**





Appendix: Glossary of Terms and Expressions

<u>Word or Expression</u>	<u>Definition</u>
<i>Advance Ship Notice (ASN)</i>	An advance ship notice or advance shipping notice (ASN) is a notification of pending deliveries, similar to a packing list. It is usually sent in an electronic format and is a common EDI document
<i>ASN</i>	See Advance Ship Notice
<i>Clinical Management System</i>	Clinic Management System is computer software products that coordinate and integrate all the inherent activities involved in the management and running of a healthcare facility.
<i>Consignment</i>	Consignment is the act of consigning, which is placing any material in the hand of another, but retaining ownership until the goods are sold or person is transferred
<i>Customer Service Personnel</i>	The customer service personnel (CSP) interact with customers in response to inquiries, requests, concerns regarding a particular product or service.
<i>ERP System</i>	Enterprise resource planning (ERP) systems integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. ERP systems automate this activity with an integrated software application. The purpose is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders.
<i>Material Management Personnel</i>	The materials management personnel (MMP) are responsible for development, maintenance and coordination of supply support systems to meet the needs of patients and hospital departments.
<i>Supplier</i>	A party that supplies goods or services. A supplier may be distinguished from a contractor or subcontractor, who commonly adds specialized input to deliverables. Also called vendor.

Appendix: Implementation Notes for EDI

Implementation Notes are added to:

Transaction Set **850 Purchase Order**

HEADER

Segment **BEG – Beginning Segment for Purchase Order**

Position **1/0200**

Date Element BEG02 (DE 92 Purchase Order Type Code)

Code Value CN Consigned Order

HC Implementation

Note 1 Consignment inventory and regular inventory may never be ordered on the same purchase order

Note 2 Consignment Purchase Orders must separate the “bill only (charge)” from the “bill and replace (Replace)” product purchase order – NO MIXED Purchase orders permitted

Segment **CSH Sales Requirements**

Position **1/1100**

Data Element CSH02 = DE 306 Action Code

Code Value CE- Charge

HC Implementation Note: An invoice to be generated for used consignment product.

Code Value RX – Replace

HC Implementation Note: Invoice for used consignment product and replenish.

DETAIL

Segment **CSH Sales Requirements**

Position **2/1420**

Data Element CSH02 = DE 306 Action Code

Code Value CE- Charge

HC Implementation Note: An invoice to be generated for used consignment product.

Code Value RX – Replace

HC Implementation Note: Invoice for used consignment product and replenish.

GS1 Canada Contact & Submission Information:

GS1 Canada
Global Standards
1500 Don Mills Road, Suite 800
Toronto, Ontario, M3B 3K4 Canada
T: 416-510-8039
E: Global.Standards@gs1ca.org

Business Requirement Work Request

<https://www.gs1ca.org/apps/CRSystem/CRForm.aspx?RequestType=Business%20Requirement%20Or%20Document>

EDI Work Request

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