



# Cendec Systems Inc.



# Overview

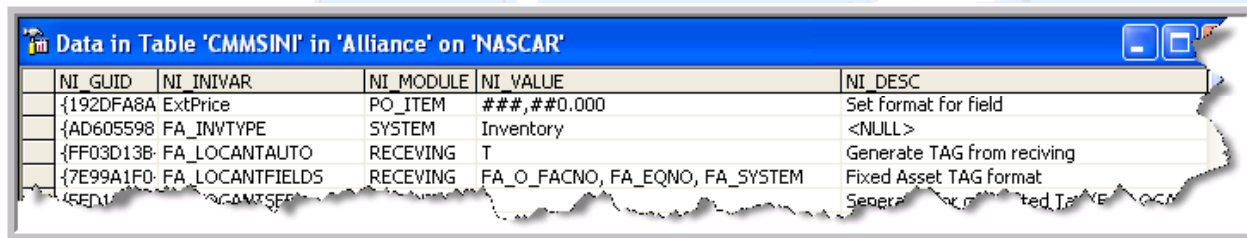
- Technology Platform
  - Microsoft VB.NET data base MS SQL or Oracle
- Methodology used to port the code/functions to the new platform
  - Code was completely re-written
  - Functional processes remained the same using previously documented process flowcharts and test scripts
  - User interface takes advantage of .Net technology and Janus grid development tools.
  - Object Oriented programming and stored procedures.
- Reporting
  - Crystal Reports, all Microsoft products supported (Excel, Word, etc.)
  - Greater filtering and flexibility in list style reports.
  - Data field names remain constant to facilitate prior SQL statements for reporting and BI queries.

# Release Strategy

- Anticipated follow-on release timeframe for CMMS<sup>32</sup> updates
  - Anticipate 2 per year
- Change Request Process
  - They are incorporated into the release strategy based on timeframe to complete and input from client base.
- Service Packs
  - Issued by priority as well as in product release updates

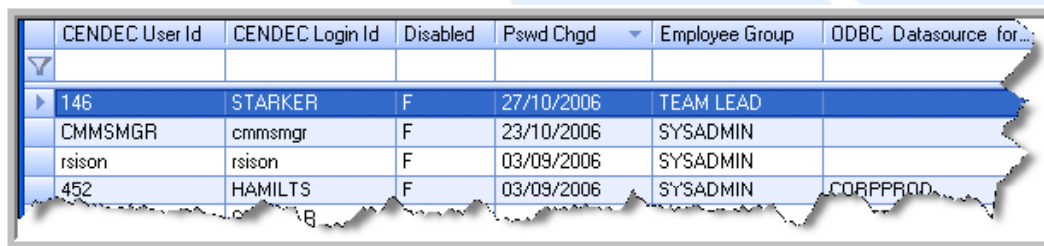
# Release Strategy - cont'd

- Historical / Future Change Requests
  - CR's are in CMMS<sup>32</sup> – evolved process CR's
  - Future CR's will continue to be optional where possible
  - Switches allow functionality to be turned on/off with administrator security only.



NI_GUID	NI_INIVAR	NI_MODULE	NI_VALUE	NI_DESC
{192DFA8A}	ExtPrice	PO_ITEM	###,##0.000	Set format for field
{AD605598}	FA_INVTYPE	SYSTEM	Inventory	<NULL>
{FF03D13B}	FA_LOCANTAUTO	RECEIVING	T	Generate TAG from reciving
{7E99A1F0}	FA_LOCANTFIELDS	RECEIVING	FA_O_FACNO, FA_EQNO, FA_SYSTEM	Fixed Asset TAG format
{5ED1...}	FA_LOCANTSEFF			Separate for m...ted, Tag VE...OCA

- SOX compliance security to the file level
  - Recent Security enhancements are included for tracking user login, password attempts and lockouts
  - Minimum password length, characters and expiry timeframe.
  - Audit trails maintained.



CENDEC User Id	CENDEC Login Id	Disabled	Pswd Chgd	Employee Group	ODBC Datasource for...
146	STARKER	F	27/10/2006	TEAM LEAD	
CMMSMGR	cmmsmgr	F	23/10/2006	SYSADMIN	
rsison	rsison	F	03/09/2006	SYSADMIN	
452	HAMILTS	F	03/09/2006	SYSADMIN	CORPPROD

# Quality Assurance

- QA testing is a combination of in-house testing as well as client Beta site testing
- Test scripts are used to evaluate user functionality and processing of data.
- Performance and stress testing is done using multiple data sets ranging from small user clients to large international clients data.

	A	B	C	D	E	F	G	H	I
1	<b>Test Case</b>								
2	A test case specifies both the inputs needed to test a particular objective and the results								
3	Name	Materials - Receiving				Created	Last Updated		
4	Label				Date	24/05/2000	08/10/2000		
5	Version Number	CMMIS32				Time			
6	Implementation Status				Author	KJI	GIS		
7									
8	<b>Definition</b>								
9	Receiving a portion of a purchase order.								
10									
11	Test Case ID	23.3.0							
12	Associated Objective ID	23.0.0							
13	<b>Test Sequence</b>								
14	<b>Actions</b>		<b>Expected Results</b>					<b>Specified Locations</b>	
15	23.3.01	Open a new Receiving record.	A new, blank receiving record will open, with "Order to final destination" as the default type.						
16	23.3.02	Use the pull down button to see the PO's to be received.	Only those PO's with items remaining to be received will appear in the pull down list (open and partial receipt).						
17	23.3.03	Select a PO by selecting it and right clicking.	You will be returned to the receiving screen, and the vendor from the purchase order will be filled in.						
18	23.3.04	Click on "receive part"	A selection screen will appear, showing all records from PO's						

# Training

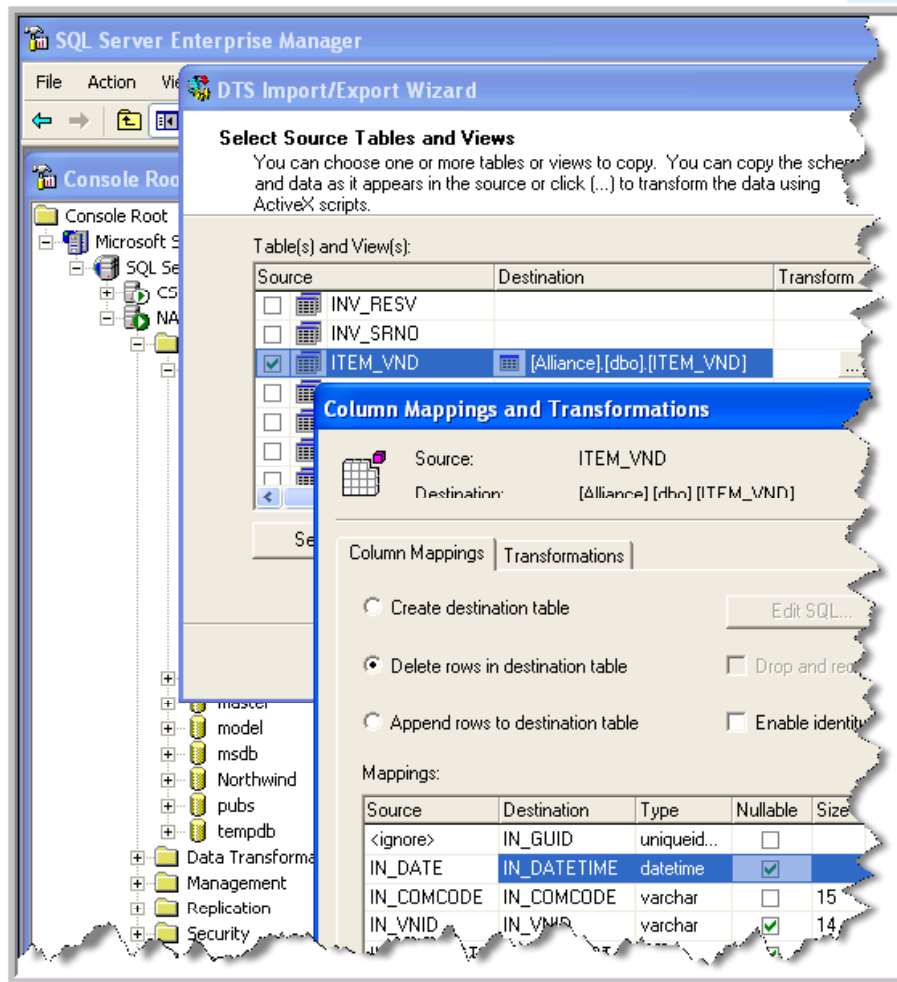
- Process training will be client dependant
- System Administration training will be required
  - Certification programs will be mandatory for administrators

# Documentation & Help

- System Administrator Manual
- Materials User Manual
- Maintenance User Manual
- Reporting Manual



# Migration planning / data conversion



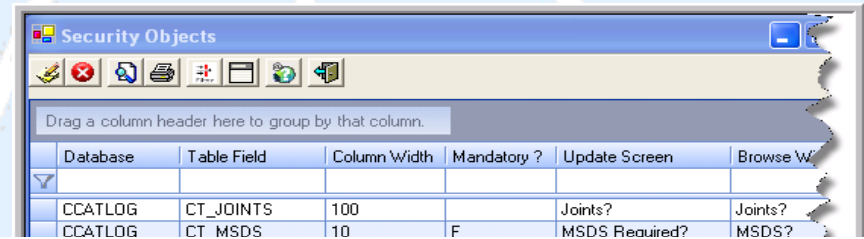
Conversion routines built to migrate data to MS SQL tables using Microsoft's import capability.

- Table constraints on MS SQL ensure data is accurate
- Data cleanup opportunities are identified and can be addressed during conversion.
- Mapping field for field with the addition of unique identifiers on new tables
- Table constraints on MS SQL ensure data is accurate

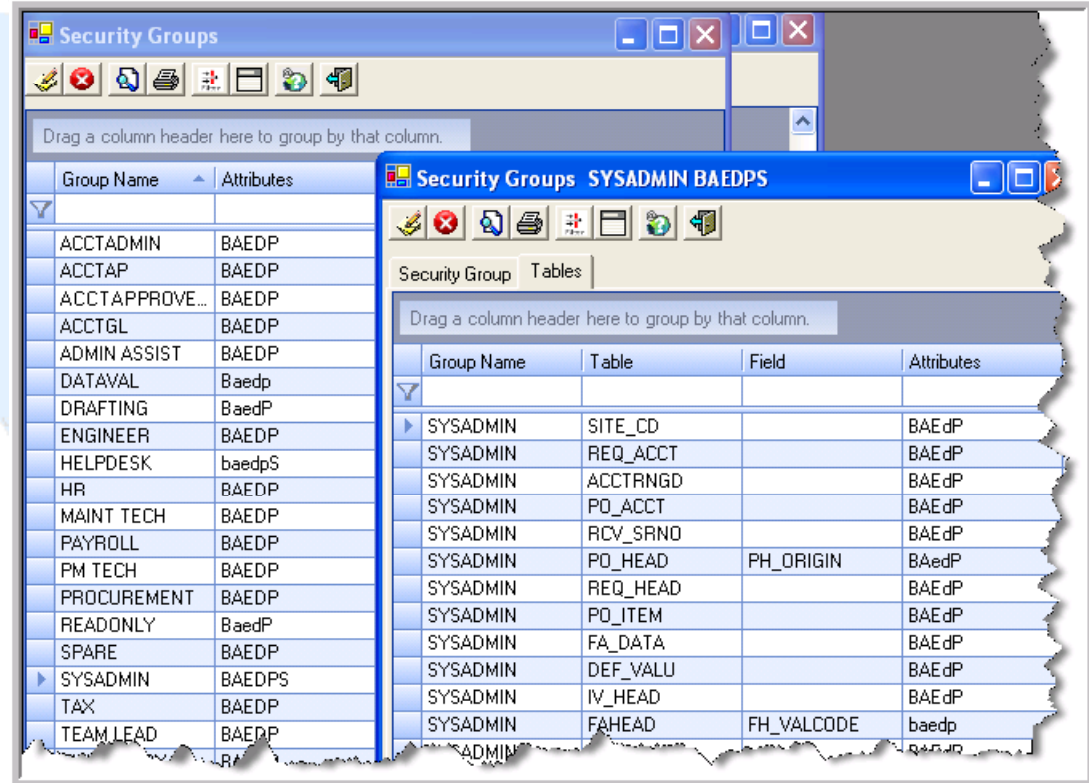


# Migration planning / data conversion - cont'd

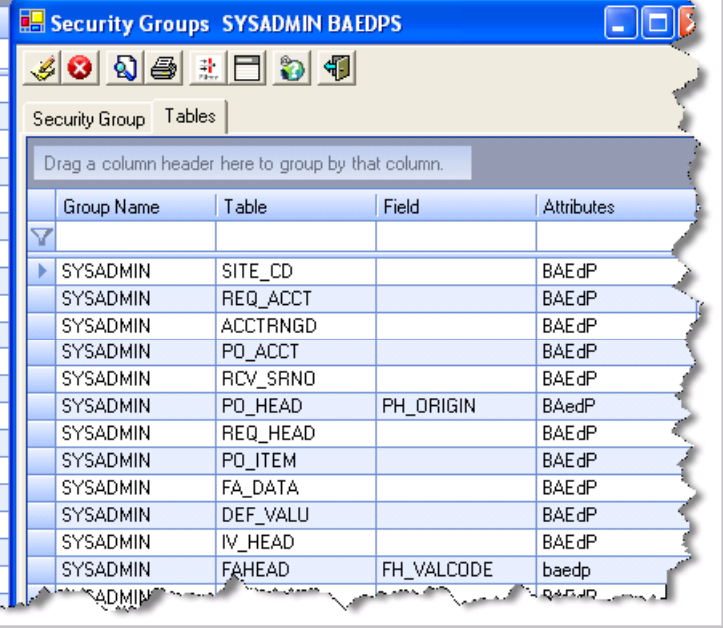
- Screen and Browse Labels converted from clients strings table to facilitate any custom field usage.
- User security defaulted with additional opportunity to elevate security to the field level.



Database	Table Field	Column Width	Mandatory ?	Update Screen	Browse W
CCATALOG	CT_JOINTS	100		Joints?	Joints?
CCATALOG	CT_MSDS	10	F	MSDS Required?	MSDS?



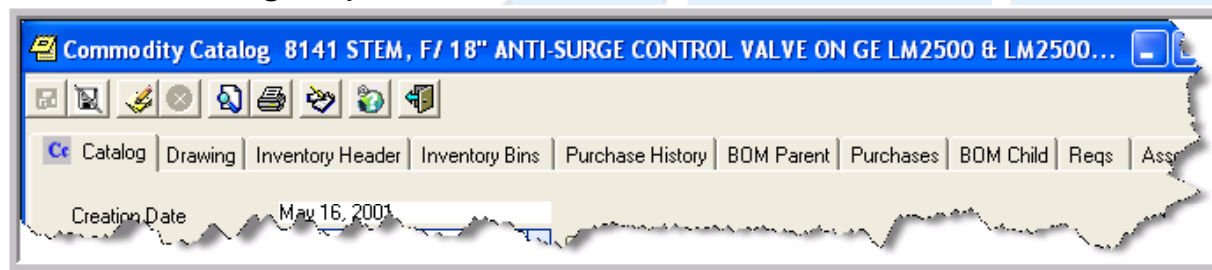
Group Name	Attributes
ACCTADMIN	BAEDP
ACCTAP	BAEDP
ACCTAPPROVE...	BAEDP
ACCTGL	BAEDP
ADMIN ASSIST	BAEDP
DATAVAL	Baedp
DRAFTING	BaedP
ENGINEER	BAEDP
HELPDESK	baedpS
HR	BAEDP
MAINT TECH	BAEDP
PAYROLL	BAEDP
PM TECH	BAEDP
PROCUREMENT	BAEDP
READONLY	BaedP
SPARE	BAEDP
SYSADMIN	BAEDPS
TAX	BAEDP
TEAM LEAD	BAEDP

Group Name	Table	Field	Attributes
SYSADMIN	SITE_CD		BAEdP
SYSADMIN	REQ_ACCT		BAEdP
SYSADMIN	ACCTRNGD		BAEdP
SYSADMIN	PO_ACCT		BAEdP
SYSADMIN	RCV_SRNO		BAEdP
SYSADMIN	PO_HEAD	PH_ORIGIN	BAEdP
SYSADMIN	REQ_HEAD		BAEdP
SYSADMIN	PO_ITEM		BAEdP
SYSADMIN	FA_DATA		BAEdP
SYSADMIN	DEF_VALU		BAEdP
SYSADMIN	IV_HEAD		BAEdP
SYSADMIN	FAHEAD	FH_VALCODE	baedp

# Functional Enhancements

- Ability to set up customized tabs by security group to display linked records, i.e. Commodity screen can have a PO Tab for Procurement group and an Equipment tab for the maintenance group.

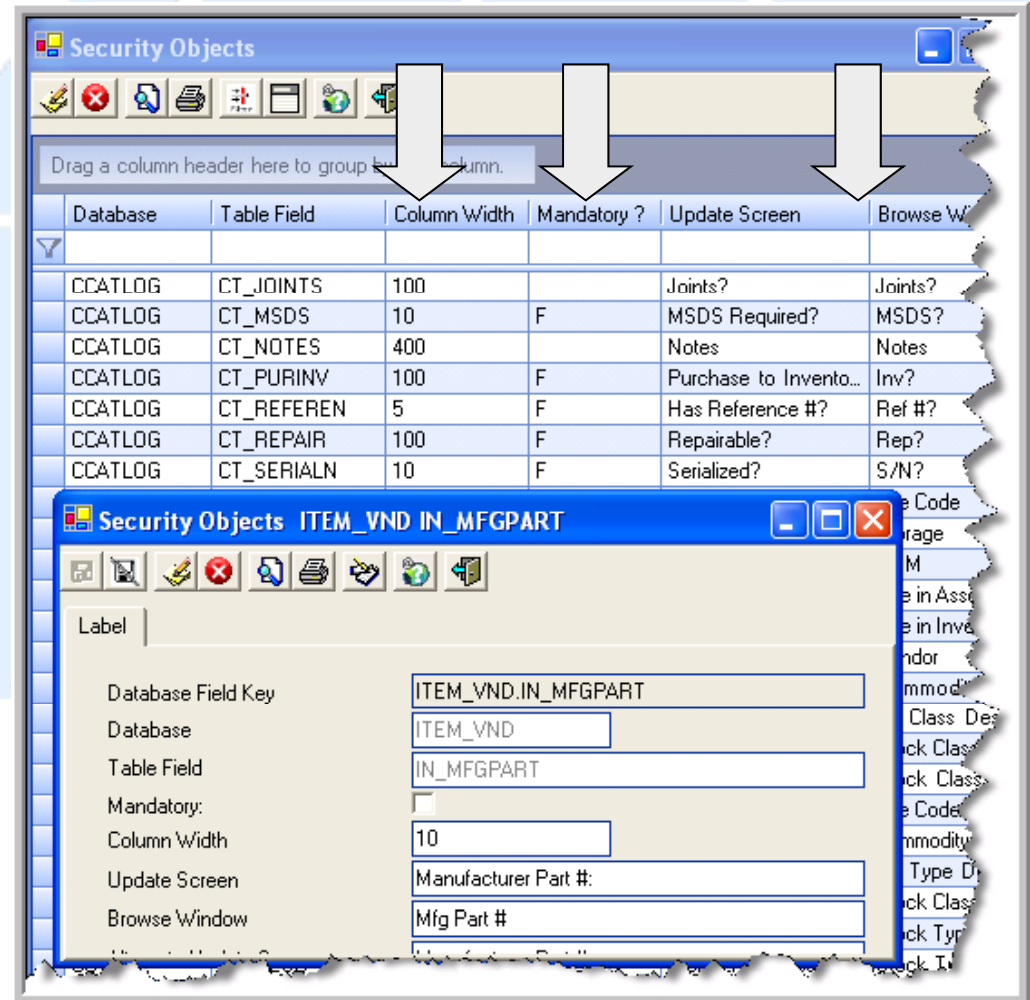


- Sorting capability by clicking on browse window header
- Dynamic grouping of records in browse windows by dragging and dropping
- Filtering can be by any field
  - **NOT** case sensitive
  - wildcard capability
- Browse windows displayed and stored for each user

Class	Type	Stock #	Desc	UOM	Vendor	Status	Cntrl?	S/N?	Stor
			*VANE*						
2400	2403	8323	NIPPLE, ON VARIABLE STATOR VANE CONTROL	Each	WISEWORTH	Active	F	F	D
2400	2403	8322	NIPPLE, TUBE SPHERICAL END 0.5625-18 ON VARIAB...	Each	WISEWORTH	Active	F	F	D
2400	2403	11122	VANE, STAGE 15 F/GE LM2500	Each	GECOMPANY	Active	F	F	D
2400	2403	11126	VANE, STAGE 15 F/GE LM2500	Each	GECOMPANY	Active	F	F	D
2400	2403	11125	VANE, STAGE 15 F/GE LM2500	Each	GECOMPANY	Active	F	F	D

## Functional Enhancements - cont'd

- Screen and Browse Labels can be changed by client
- Mandatory Fields Defined at the screen / field level.
- Column Widths defined and defaulted for pick lists.



The screenshot displays two windows from the 'Security Objects' application. The top window shows a table of database fields with columns for Database, Table Field, Column Width, Mandatory?, Update Screen, and Browse Window. The bottom window shows the configuration for the 'ITEM\_VND.IN\_MFGPART' field, with fields for Label, Database Field Key, Database, Table Field, Mandatory, Column Width, Update Screen, and Browse Window.

Database	Table Field	Column Width	Mandatory ?	Update Screen	Browse W
CCATLOG	CT_JOINTS	100		Joints?	Joints?
CCATLOG	CT_MSDS	10	F	MSDS Required?	MSDS?
CCATLOG	CT_NOTES	400		Notes	Notes
CCATLOG	CT_PURINV	100	F	Purchase to Invento...	Inv?
CCATLOG	CT_REFEREN	5	F	Has Reference #?	Ref #?
CCATLOG	CT_REPAIR	100	F	Repairable?	Rep?
CCATLOG	CT_SERIALN	10	F	Serialized?	S/N?

Label	
Database Field Key	ITEM_VND.IN_MFGPART
Database	ITEM_VND
Table Field	IN_MFGPART
Mandatory:	<input type="checkbox"/>
Column Width	10
Update Screen	Manufacturer Part #:
Browse Window	Mfg Part #

## Functional Enhancements - cont'd

- Security to display fields set for user groups for both browse windows and update screens
- Browse window and update screen labels WYSIWYG printing capability (List style reporting)
- Windows can be re-sized and cascaded or tiled
- Individual users can assign and change defaults for fields on any update screen they have access to
- Hierarchal display of parent child equipment records to allow drill down to equipment and locations
- GUID (Unique Identifiers) used with MS SQL to facilitate better synchronization and indexing of tables

# Technology Benefits

- SQL Server 2005 is a comprehensive database platform providing enterprise-class data management with integrated business intelligence (BI) tools.
- The SQL Server 2005 data engine lies at the core of this enterprise data management solution.
- Drive data into every corner of your business through scorecards, dashboards, Web services, and mobile devices.

# Technology Benefits -cont

## Enterprise Data Management

- Always be secure yet available to your users.
- Reduced application downtime
- Increased scalability and performance
- Tight yet flexible security controls
  
- Key enhancements to enterprise data management in the following areas:
  - ✓ Manageability
  - ✓ Availability
  - ✓ Scalability
  - ✓ Security



# Technology Benefits -cont

## Security

- SQL Server 2005 makes significant enhancements to the security model of the database platform, with the intention of providing more precise and flexible control to enable tighter security of the data.
  - ✓ Enforcing policies for SQL Server login passwords in the authentication space.
  - ✓ Providing for more granularity in terms of specifying permissions at various scopes in the authorization space.
  - ✓ Allowing for the separation of owners and schemas in the security management space.



# Technology Benefits -cont

## Reporting Services

- Reports can be delivered in a variety of formats. As an integrated component of SQL Server 2005, Reporting Services provides the following:
  - ✓ A high-performance engine for processing and formatting reports.
  - ✓ A complete set of tools for creating, managing, and viewing reports.
  - ✓ An extensible architecture and open interfaces for embedding reports or integrating reporting solutions in diverse IT environments.

# Third party add on products

- Touch Screen Technology
- Microsoft's Dynamic AX ERP Solution

# Integration

- Interfaces available
  - Chart of Accounts
  - Vendor
  - Accounts Payable
  - General Ledger
  - HR / Timecards
  - Equipment Properties (SCADA & Monitoring Devices)
- Mobile solutions – wireless, handheld devices?
  - Capability to facilitate devices supported by Microsoft and .Net
- Bar-coding



Inventory Issues  
Returns To Inventory  
Physical Inventory Counts  
Receipts from Purchase Orders (Receiving)  
Fixed Asset Counts

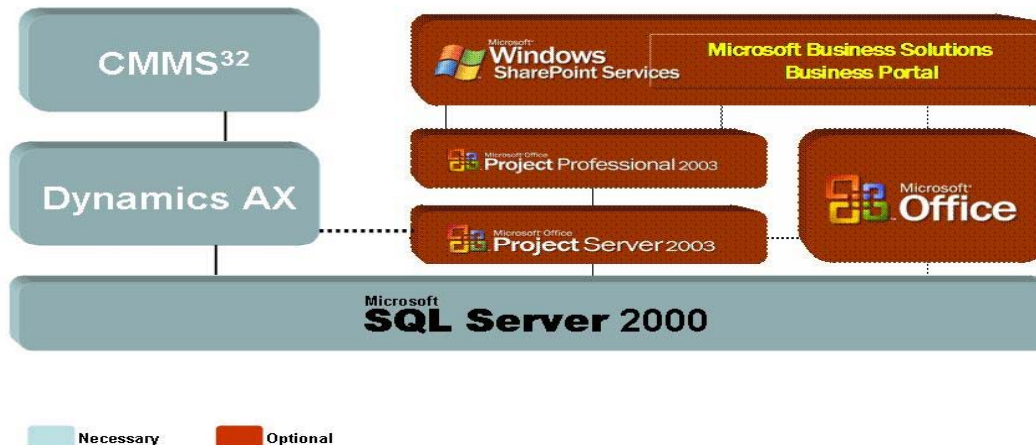
Preview/Edit transaction prior to processing  
Process all transactions or in batches with a complete audit trail.

Exploring partnerships to offer a wider range of bar-coding devices including RF technology

# Partnerships and Alliances

- Microsoft partner
  - Future integration with Outlook / Forms for document approvals and design
  - Future integration with Calendar and MS Project for scheduling and reporting
    - Work Orders
    - PM Forecasts
    - Turnarounds

## Technology Platform



# Partnerships and Alliances cont.

- Integration with Dynamics AX for clients looking for complete ERP functionality

The solution delivers source code along with a powerful development and customization environment. Microsoft Dynamics AX adapts to new business processes, and responds quickly to changing customer requirements, new government regulations, and shifts in the competitive environment.

As well as adapting to existing or desired business processes, Microsoft Dynamics AX is designed to fit with existing systems.

## Microsoft Dynamics AX Business Process Coverage





# Partnerships and Alliances cont.

Touch Screen and Handheld enhancements

