



COSMO CONSULT
Business-Software for People



Business
Software
for People

cc | factory data capture (fdc)

QUANTITY DATA
PRODUCTION TIME DATA ORDER PACKAGES
TARGET/ACTUAL COMPARISONS WORK AREAS
STATUS DATA BREAK MODELS PERSONNEL DATA SERVICE COLLECTIVE ORDERS CLOCKING
PROCESS DATA ASSEMBLY POSTING AUTHORISATIONS
FACTORY DATA CAPTURE (FDC)
HUMAN RESOURCES SHIFT STRUCTURES ORDER DATA
VARIABLE RECORDING FIELDS

Microsoft Partner
Gold Enterprise Resource Planning

cc|factory data capture (fdc)

For greater transparency in working processes

Be it manufacturing, project work, services or assembly, requirements such as continual transparency of the workflow, material flow and value flow are difficult to meet without good factory data capture (FDC). Companies often find they are lacking targets or setpoints, but feedback shows that it is predominantly actual values that are either absent or only partially documented due to insufficient recording tools. This makes effective controlling either difficult or almost impossible.

cc|fdc creates the necessary reference values, documents the entire actual process and enables costs and times to be allocated to an order precisely. This enables quantities and times to be subjected to various variance analyses and target/actual comparisons at both order and product level. cc|fdc therefore helps you to control, monitor and optimise your processes.

COSMO CONSULT has years of experience in developing and implementing timekeeping systems. We advise and support you in the creation of a company-specific FDC concept and the implementation of a FDC system to fulfil your requirements.

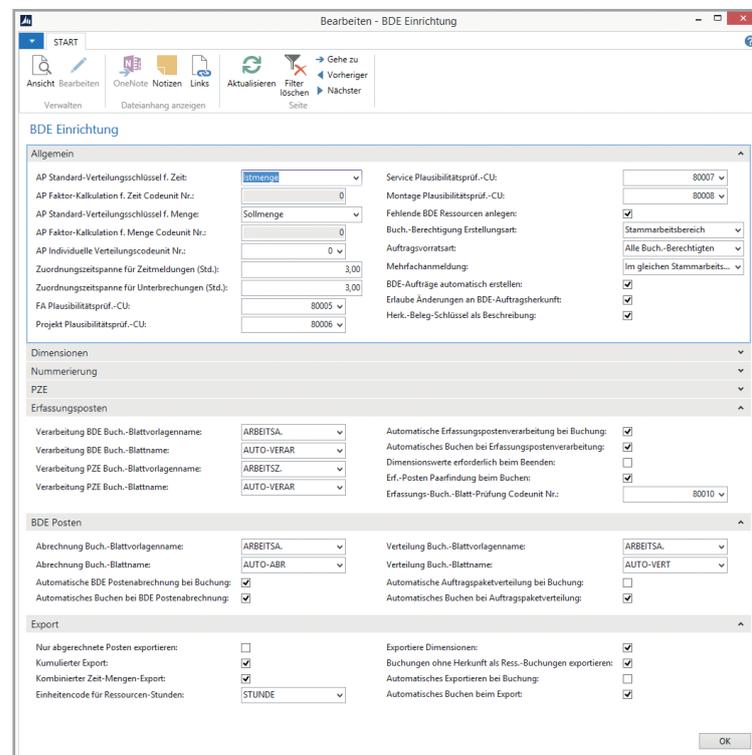
INTEGRATION INTO ALL RELEVANT MICROSOFT DYNAMICS NAV MODULES

cc|fdc offers fully automated integration into all relevant Microsoft Dynamics NAV modules (available in real time as an option), i.e.:

- ▶ The deliberately simple data on times, quantities and status recorded using cc|fdc goes through plausibility checks and highly effective export routines to ensure that there are no conflicts before being posted direct to the partly complex ERP environment.
- ▶ Additional postings to the relevant modules are not necessary.

Particular highlights:

- ▶ Optional cumulative export of times and quantities (grouping of values to reduce the number of items)
- ▶ Optimum processing of cancellation postings
- ▶ Transfer of item tracking details (serial/batch numbers) for production items and consumables
- ▶ Configurable transfer of Microsoft Dynamics NAV standard dimensions



CC|FDC SET-UP

SUPPORTED MICROSOFT DYNAMICS NAV STANDARD MODULES:

▶ Production orders

Used to record, post and analyse actual messages and consumption, i.e., the quantities of items produced, the times of the work steps, status information on the work steps and component consumption.

Jobs

Used to record, post and analyse project times, project quantities and project consumption. (For project-based production companies and project service providers).

Service orders

Used to record, post and analyse service times and consumption.

Assembly orders (as of Microsoft Dynamics NAV)

The assembly-orders function in Microsoft Dynamics NAV is used to assemble or process sets. Assembly orders are ideal for simple production companies, wholesalers and individual retailers where the production process

- ▶ Is part of the warehouse process
- ▶ Is short and only involves a few simple work steps
- ▶ Only needs to be recorded in the ERP system with minimal set-up and training (without implementation of the production module)

Resource journal

- ▶ Used to record, post and analyse resource times.
- ▶ Using costing (i.e. internal set-offs and allocations), this export version enables you to determine effective operating costs.
- ▶ Analysis of costs per cost centre and cost unit, e.g., to create reliable bases for calculation.

Human resources

- ▶ For using employee data

PROPRIETARY ORDER MODULE FOR WORK ORDERS

FDC work orders represent the original records for the supported Microsoft Dynamics NAV standard modules (e.g. production orders from the production module). They can be created manually via the pull principle or automatically via the push principle, i.e.:

The screenshot displays the 'Bearbeiten - BDE Arbeitsauftrag - 1011002' window in Microsoft Dynamics NAV. The window title bar shows the application name and the specific work order ID. The interface includes a ribbon with various action buttons like 'Ansicht', 'Neu', 'Löschen', 'Verwalten', 'Freigeben', 'Status zurücksetzen', 'BDE Erfassungsstellen', 'Vorgang', 'Fertigungsauftrag', 'Von Projekt', 'Von Serviceauftrag', 'Von Montageauftrag', 'Herkunft', 'Arbeitsgänge holen', 'Verteilen', 'Auftragspaket', 'OneNote Notizen', 'Links', 'Dateianhang anzeigen', 'Aktualisieren', 'Filter löschen', 'Seite', 'Gehe zu', 'Vorheriger', and 'Nächster'. The main area is divided into sections: 'Allgemein' (General) with fields for 'Nr.' (1011002), 'Art' (Mit Herkunft), 'Beschreibung' (FA-Zeile 1011002 10000), 'Status' (Freigegeben), and summary statistics like 'Gesamt Istzeit (brutto) (Std.): 24,89' and 'Gesamt Istzeit (Std.): 24,89'. Below this is the 'Zeilen' (Lines) section, which contains a table with the following data:

Beschreibung	BDE Ressourcennr.	Fälligkeitsdatum	Sollzeit (Std.)	Istzeit (Std.)	Sollmenge (Basis)	Istmenge (Basis)	Verbrauchsm... (Basis)	Ausschussm... (Basis)	Barcode	Bu...	Faktor Mengenverteilu...	Faktor Zeitverteilung
FA-Arbeitsgang Freigegeben,1011002,10000,1000,10: Radmontage	100	28.01.2015	7,23	9,13	27,00	27	0	0	BC001013	Nein	0,00	0,00
FA-Arbeitsgang Freigegeben,1011002,10000,1000,20: Kettenmon...	120	29.01.2015	7,00	7,20	27,00	27	0	0	BC001014	Nein	0,00	0,00
FA-Arbeitsgang Freigegeben,1011002,10000,1000,30: Endmontage	130	30.01.2015	9,17	5,00	27,00	27	0	0	BC001015	Nein	0,00	0,00
FA-Arbeitsgang Freigegeben,1011002,10000,1000,40: Kontrolle	110	30.01.2015	3,77	3,56	27,00	27	0	0	BC001016	Nein	0,00	0,00

At the bottom of the window, the 'Auftragspaket' (Order Package) section includes dropdown menus for 'Auftragspaket Zeit Verteilungsschlüssel' (set to 'Gleichverteilt'), 'Auftragspaket Menge Verteilungsschlüssel' (set to 'Gleichverteilt'), and 'Auftragspaket BDE Ressourcenfilter'. There are also input fields for 'Verteilungsfehler', 'Verteilts', 'Verteilungsdatum', and 'Verteilungszeit'. An 'OK' button is located at the bottom right of the window.

WORK ORDER IN CC|FDC



cc|factory data capture (fdc)

For greater transparency in working processes

- ▶ Either the original records relevant for product data acquisition are pulled into FDC work orders, or
- ▶ When a new original record is created, the FDC work order appears automatically

It is also possible to represent overheads orders using FDC work orders.

The required barcodes can be printed directly onto the work slip of the original record or onto the FDC work order slip.

Original records with a FDC work order are write-protected; a feature that would normally be controlled through the change-protocol function. However, it is not necessary to activate the change protocol and the relevant tables, leaving the change protocol free for other purposes.

ORDER PACKAGES FOR COLLECTIVE ORDERS OR MULTIPLE MACHINE OPERATION

If an employee only works on one order or operates just one machine, it is always clear how the recorded times must be allocated. When operating multiple machines or processing collective orders, it is not possible to allocate the times without further processing. Configurable order packages in cc|fdc assist with this task.

In cc|fdc, employees can clock or post multiple orders at the same time. The "order packages" are created prior to this. The program determines and distributes the actual times and/or actual

quantities to the individual orders based on a number of factors, such as the setpoint (prescribed) time. Settled order packages can be resettled at any time.

The distribution options available meet virtually all requirements in practice. Individual distribution or factor calculation are available for special requirements.

VARIABLE RECORDING FIELDS USING FDC-DIMENSIONS

As well as utilising the regular dimension structure of Microsoft Dynamics NAV, cc|fdc offers its own FDC dimension structure. This makes it possible to report company-specific data/entries beyond the input required for the posting. So, for example, users can also input event codes, quality indicators, machine data and/or process parameters for each posting and then analyse them later. The reliability of FDC dimension values can also be managed using the individual FDC resource and/or the FDC work order. If reliable FDC dimension values are stored in both locations, the intersection for corresponding transactions is reliable.

POSTING AUTHORISATIONS

The reliability of postings can be controlled by means of the FDC resource, the FDC working area and/or the FDC work order. If posting authorisations are stored in all locations, then the intersection of authorisations for corresponding transactions is valid.

TAB FOR THE ORDER PACKAGE IN THE PDA WORK ORDER



cc|factory data capture (fdc)

For greater transparency in working processes

SIMPLE TIME AND ATTENDANCE

cc|fdc features its own (simple) time and attendance function for two important reasons:

- a) Time and attendance postings can be recorded in cc|fdc and exported to other modules, providing a standardised recording interface. cc|fdc supports the recording of the following time and attendance data: arrival, departure, breaks and unscheduled downtime.
- b) Time and attendance postings from other modules can be imported into cc|fdc. This makes it possible to integrate another time and attendance system. An attendance/absence record can then be generated for the FDC input on the basis of the time and attendance data (despite the use of different systems). Time and attendance can also be compared with the FDC order time.

BDE Arbeitsauftr./gr.	BDE Ressource	Sub-Dat	Ist-Dat (Std.)	Sub-Planwert (Std.)	Ist-Planwert (Std.)								
AUFTRAG001	Mischleistung		10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
	Mechaniker		7,17	1,18	-0,11	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Mischleistung		3,00	0,50	-0,24	0,00	1,00	-0,20	0,00	0,00	0,00	0,00	0,00
	Schweißer		4,00	0,00	-0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
AUFTRAG002	Mischleistung		2,25	2,00	-0,41	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Mechaniker		0,25	0,00	-0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Mischleistung		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Schweißer		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

CC|PDA ACTUAL/TARGET COMPARISON

Vorfall	Ressource	Gesamtheit	Gesamtheit	Gesamtheit	Gesamtheit	Gesamtheit	Fehlzeit	Auftragsbezogene	Nicht auftragsbezogene	Nicht zurechenbare
		Brutto	Pause	Langzeitige	Sub	Netto	Verweilt	Aufwand	Aufwand	Aufwand
23.01.12	LINDA	0,00	-2,00	-1,00	7,00	5,00	2,00	5,00	116,00%	-0,00
24.01.12	LINDA	10,00	-1,50	-0,50	7,00	6,00	-1,00	6,50	81,25%	1,50
25.01.12	LINDA	0,00	-1,00	0,00	7,00	7,00	-0,00	2,50	32,95%	5,30
26.01.12	LINDA	0,00	-0,50	-0,00	7,00	7,00	0,00	5,00	71,43%	1,00
27.01.12	LINDA	0,00	-0,50	-0,00	7,00	7,00	0,00	3,70	74,00%	1,00

CC|PDA EMPLOYEE STATISTICS

INTEGRATION OF VARIOUS TIME AND ATTENDANCE SYSTEMS

cc|fdc has various options, principles and adapters to enable interfaces (SQL tables, Web services etc.) for connection to other time and attendance systems.

Various interfaces are already in place and ready for use as required — please just ask.

REPORTING AND ANALYSIS

With all the data gathered, an extensive range of diagrams and tables are at your disposal for analysis. The data can be correlated and analysed using various factors. Meaningful and typical KPIs (e.g., OEE) enable internal comparisons.

Bearbeiten - BDE Terminal

AKTIONEN

Terminal Schließen Aktualisieren Seite

COSMO CONSULT Business Software für Menschen

22.11.2013 13:39:53

Kommen Anmelden

Gehen Abmelden

Pause Fertigmeldung

Verbrauch

BDE Terminal Erfassung für Dynamics NAV

Schließen

CC|PDA TERMINAL

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For greater transparency in working processes

HIGHLIGHTS

- ▶ Use of production data acquisition in Microsoft Dynamics NAV
- ▶ Various terminal recording screens (touch screen-optimised)
- ▶ Expansion option for recording via remote scanner — mobile data acquisition (MDA) (MDE process dialogs for FDC delivery scope of cc|mobile solution)
- ▶ Expansion option of a configurable barcode management module to define/set up and analyse barcodes (in the delivery scope of cc|mobile solution)
- ▶ Easy to use with stable, error-resistant processing
- ▶ Graduated configuration of automation right through to real-time processing: You decide whether the recorded data is settled and/or transferred periodically, cumulatively or in real time
- ▶ Switching between work areas (cost centres)
- ▶ Various posting options: Clocking — posting recorded data (time and attendance and production data acquisition), result values — posting FDC data and posting time and attendance data
- ▶ Management of work areas, shift structures, break models and posting authorisations
- ▶ Recording as much additional data as you like through the FDC dimensions, which, for example, can also be used for recording codes (with or without limitation of reliability)
- ▶ When recording quantities for manufactured or consumed items, all units and item tracking settings are supported from the item master
- ▶ Display of the order pool (by work area) with selection option for posting

CC|FDC RESOURCE

Schicht...	Woche...	BDE Pausen...	Beginn (Uhrzeit)	Ende (Uhrzeit)	Begi...	End...	Soll-Schichtzeit...	Soll-Schichtzeit (Brutt...
1	Alle	SCHICHT1	07:00:00	15:59:59	<input type="checkbox"/>	<input type="checkbox"/>	7,00	9,00
2	Dienstag	SCHICHT2	15:00:00	23:59:59	<input type="checkbox"/>	<input type="checkbox"/>	7,50	9,00
2	Donnerstag	SCHICHT2	15:00:00	23:59:59	<input type="checkbox"/>	<input type="checkbox"/>	7,50	9,00

FDC SHIFT STRUCTURE

Beschreibung	Pausenzeit	Beginn (Uhrzeit)	Ende (Uhrzeit)	Beginn (Uhrzeit) am Folgetag	Ende (Uhrzeit) am Folgetag
Frühstückspause	0,50	08:00:00	08:30:00	<input type="checkbox"/>	<input type="checkbox"/>
Mittagspause	1,00	12:30:00	13:30:00	<input type="checkbox"/>	<input type="checkbox"/>
Nachmittag	0,50	14:30:00	15:00:00	<input type="checkbox"/>	<input type="checkbox"/>

FDC BREAK MODEL



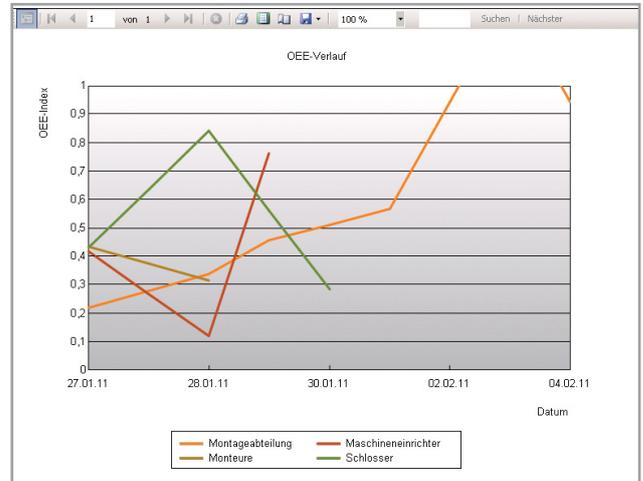
cc|factory data capture (fdc)

For greater transparency in working processes

- ▶ Integrated processing requests to take company specifics into account simply such as special restrictions or out-of-the-ordinary calculations

SUCCESS FACTORS AND RELIABILITY

- ▶ **Process security**
 - ▶ Production of process transparency
 - ▶ Recording of incidents and warnings
 - ▶ Order (progress) tracking
 - ▶ Use of overheads orders
 - ▶ Recording of unscheduled activities
 - ▶ Recording of set-up times and waiting times
- ▶ **Stock reliability**
 - ▶ Complete recording of incoming/outgoing materials with order reference, cost-centre reference and/or cost-unit reference
 - ▶ Recording of unscheduled incoming/outgoing of materials
 - ▶ Recording of reject quantities/deficiencies at all production stages
- ▶ **Investment reliability**
 - ▶ Certified and fully integrated expansion for Microsoft Dynamics NAV
 - ▶ Constant further development and comprehensive support
 - ▶ cc|fdc is future-proof, scalable and flexible



CC|FDC OEE CHART

OOE

Von: 27.01.11
Bis: 27.01.12

Ressourcenname	Verfügbarkeit	Effektivität	Qualitätsrate	OEE Wert
Montageabteilung	0,97	0,15	0,91	0,13
Monteur	0,92	0,33	0,96	0,29
Maschineneinrichter	0,98	0,17	1,00	0,17
Schlosser	0,97	0,10	0,96	0,09

Verfügbarkeit

Ressourcenname	Planbelegungszeit	Überstunden	Ungelappte Ausfallzeiten	Rüstzeit	Hauptnutzungszeit	Verfügbarkeit
Montageabteilung	62,03	13,03	1,07	0,80	60,36	0,97
Monteur	19,66	5,66	0,83	0,80	18,03	0,92
Maschineneinrichter	21,00	0,00	0,00	0,37	20,63	0,98
Schlosser	33,72	11,72	0,43	0,65	32,64	0,97

Effektivität

Ressourcenname	Hauptnutzungszeit	Produzierte Menge	Produzierbare Menge	Effektivität
Montageabteilung	60,36	69,00	472,50	0,15
Monteur	18,03	28,00	84,87	0,33
Maschineneinrichter	20,63	28,00	160,50	0,17
Schlosser	32,64	28,00	277,57	0,10

Qualitätsrate

Ressourcenname	Produzierte Menge	Gütemenge	Ausschussmenge	Qualitätsrate
Montageabteilung	69,00	63,00	6,00	0,91
Monteur	28,00	27,00	1,00	0,96
Maschineneinrichter	28,00	28,00	0,00	1,00
Schlosser	28,00	27,00	1,00	0,96

CC|FDC OEE ANALYSIS

BDE Posten

Filtereingabe (F): Posten

Keine Filter angewendet

Postenart	Buchung...	BDE Arbel...	BDE Res...	Bruttocost (St...	Nettocost (Std...	Fertig gestell...	Verbrauch...	Stor...	Abg...	Exp...	Vert...	Lfd...
Zeit- und Fertigm...	27.01.2011	1011004	110	3,00	2,50	0	0	0	0	0	0	1
Zeit- und Fertigm...				3,00	3,00	0	0	0	0	0	0	2
Zeit- und Fertigm...												3
Zeit- und Fertigm...												4
Zeit- und Fertigm...												5
Zeit- und Fertigm...												6
Zeit- und Fertigm...												7
Zeit- und Fertigm...												8
Zeit- und Fertigm...												9

ANSICHT - BDE Detaillierte Posten

AKTIONEN

Posten stornieren... Als Übersicht anzeigen... Als Diagramm anzeigen... Einträge Notizen... Links... Aktualisieren... Filter löschen... Suchen... Filter... Suchen... Seite

BDE Detaillierte Posten

Filtereingabe (F): Posten

Filter: 1 - Nein

Zeit (Std.)	Zeit (absolut...)	Anteil...	Fertig gestell...	Verbrauch...	Stor...	Storniert...	Exp...	Pal...	Pal...	Ab...	Vert...	Lfd...
3,00	3,00	0	0	0	0	0	0	0	0	0	0	1
-0,50	0,00	0	0	0	0	0	0	0	0	0	0	2

Schließen

CC|FDC ITEMS

RESELLER PROFILE

Naviona is a Microsoft partner and Dynamics NAV reseller with a long history of implementing and supporting the manufacturing verticals from COSMO Consult. As the premier reseller we have become the go-to partner for advanced manufacturing implementations based on Dynamics NAV in the US.

Naviona is the 'Navy SEALs of Dynamics NAV'; we are experienced, well trained and we get the job done. Our customer base is primarily manufacturing and distribution companies where finance, operations and inventory management are in focus.

The services provided includes everything from project management to development, we do full Dynamics NAV implementations, optimizations of business processes and ongoing support. We are also available if you just want a second opinion about something related to Dynamics NAV.

Our team is located across the US, from Tampa in the southeast to San Diego in the west. Feel free to contact us for more information or to request a demo.

Naviona, LLC

Phone: +1 813 512 9944

E-mail: info@naviona.com

Web: www.naviona.com

Visiting address:

3314 Henderson Blvd, Suite 100C

Tampa, FL 33609, USA

naviona

