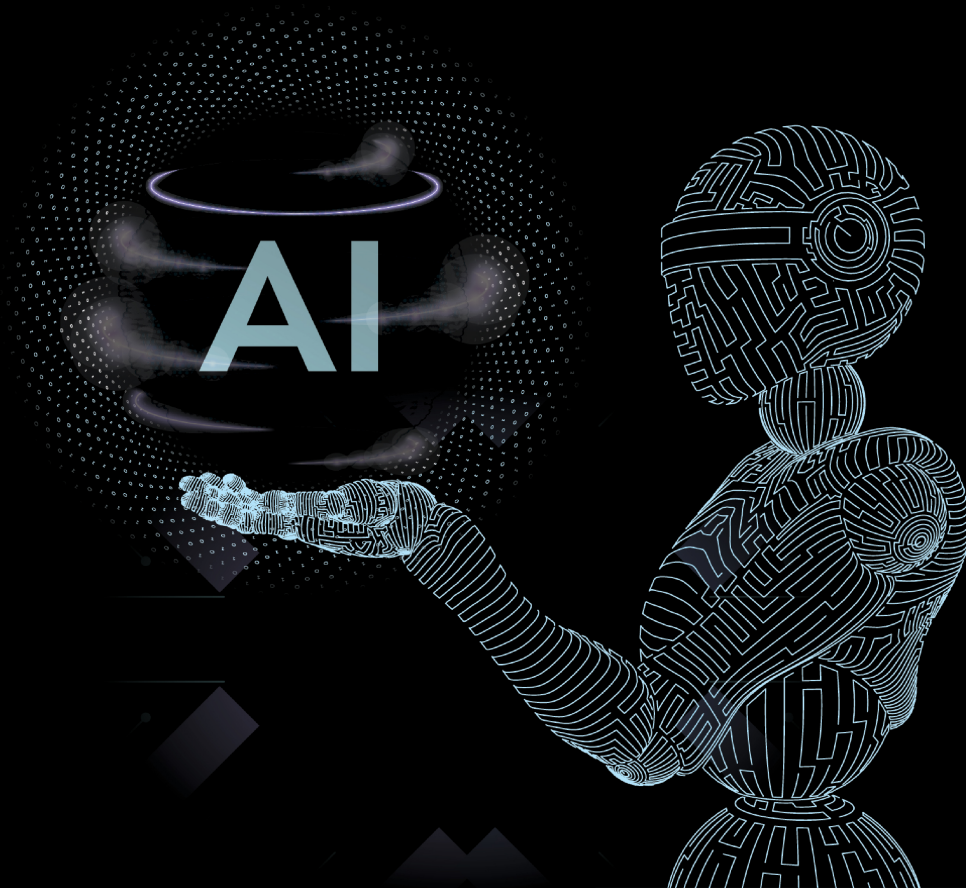




BEYOND THE LEDGERS:



Cutting-Edge Data Insights with
Business Central and AI



Silviu Virlan



www.svirlan.com

Beyond the Ledgers: Cutting-edge data insights with Business Central and AI

Silviu Virlan

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Foreword

In an era where data is the new currency and Artificial Intelligence is the new frontier, analytics stands in the middle, helping businesses who want to extract information from data. This book delves into the heart of analytics, unraveling its power to transform raw data into strategic insights. As AI continues to evolve, analytics becomes not just a tool, but a vital differentiator that can make or break your company's future. It is the compass that navigates decision-making, the lens that sharpens focus, and the engine that drives innovation. In this pivotal moment, understanding analytics is not just beneficial—it's imperative for survival and success in the digital age.

But how can you make such a vision for analytics practical in your organization? Silviu's book tries to do that, being very hands-on and focusing on one very practical aspect of analytics, namely ad-hoc data analysis of data in Microsoft Dynamics 365 Business Central. You need to do ad-hoc data analysis whenever you have questions that cannot be answered by running an already existing report. For example when your manager asks you "How many teddy bears did we sell in Greece last month compared to same month last year" on a Friday afternoon, five minutes before you had planned to leave the office to pick up your kids. Business Central has a built-in tool for this type of analytics, and Silviu is an expert in how the tool can be used in all functional areas of your ERP system. Read the book end-to-end, or as a reference where you lookup new applications when starting to learn new functionality in Business Central. No matter your learning style, I am sure that you can take away key learnings from reading Silviu's book and directly apply ways to perform data analysis in your organization. This way, you can make the somewhat abstract introduction in this foreword tangible and concrete.

Kennie Nybo Pontoppidan,
Principal Program Manager at Microsoft

Contributors

About the author Silviu Virlan

Silviu worked in the last 25 years with Microsoft technologies, contributing to solid .NET applications in the financial industry and ERP.

Last 10 years **Silviu** worked with Microsoft's version of ERP for small businesses, also known as Business Central and its precursor Dynamics NAV.

Silviu strives to stay current with the latest trends in the technology. When we launch on developing something new, build a proof of concept, tinker with a new Microsoft technology, the process is difficult. Fortunately, there are resources like mibuso, twitter #bcallhelp, community.dynamics.com, stackoverflow, yammer which have provided **Silviu** with tremendous help since his first days with Dynamics NAV. This book and his blog site: www.svirlan.com is an attempt to help those that, just like him, searched and borrowed solutions found online.

The sample code in this book and his website are provided as-is.

About the contributors

Meghan Murray is a certified Business Central veteran with 20 years of experience working with Business Central and the predecessor products. She has worked with various partners and hundreds of customers to implement, support, customize and upgrade. She has extensive knowledge of the product and is widely respected among her colleagues and customers as an expert.

Stefan Lammers, Application Designer, Consulter and Project Manager in a wide variety of business application projects based on Microsoft Dynamics NAV and owner PMXDynamics Canada and focu.biz Germany.

Stefan Lammers is the owner and managing director of PMX Dynamics, an international IT solution center specialized in Microsoft Dynamics ERP solutions. He is a first-hour veteran, having worked with Navision's text-based version in the 1990s and helped educating Navision Partners in Germany and Austria before Navision became Microsoft Dynamics. He was always interested in how IT, specifically software, can help businesses to optimize their processes. During his work at PMX Dynamics he closed some gaps in the functionality of Dynamics NAV / Business Central by developing a number of extensions available on the Microsoft AppSource.

Preface	01
Who this book is for	01
What the book covers	07
1. Introduction	08
1.1 About Business Central	08
1.2 About Business Central Ad-hoc Analysis	08
1.2.1 Setting up Data Analysis Mode Elements	09
1.3 About Excel's Analyze Data feature	10
1.4 About ChatGPT	11
2. Customer Ledger Entries Insights	13
2.1 What are customer ledger entries in Business Central?	13
2.2 What use cases will trigger the system to generate Customer Ledger Entries?	13
2.2.1 Posting a sales order	13
2.2.2 Posting a customer payment via Cash Receipts Journal:	16
2.2.3 Posting a customer payment via Bank Deposits	18
2.2.4 Posting a payment via Register Customer Payments	19
2.3 Analytics of Customer Ledger Entries records	20
2.3.1 Total invoiced amount by customer	20
2.3.2 Total outstanding amount by customer	35
2.3.3 Average Days to pay invoices	38
2.4 Average Late Payments	44
2.4.1 Analyze Mode in Business Central	45
3. Vendor Ledger Entries insights	47
3.1 What are vendor ledger entries in Business Central?	47
3.2 What use cases will trigger the system to generate Vendor Ledger Entries?	47
3.3 Analytics of Vendor Ledger Entries records	58
3.3.1 What you owe vendors, by time intervals provided by Due Date	58
3.4 Other Analytics for Purchasing	72
3.4.1 Goods received not invoiced across vendors	73
4. Item Ledger Entries insights	75
4.1 What are item ledger entries in Business Central?	75
4.2 What use cases will trigger the system to generate Item Ledger Entries?	76
4.3 Analytics for Sales	78
4.3 Items partially shipped and not fully Invoiced.	79
4.4 Items shipped to customers	80
4.4.1 Analyze Mode in Business Central	80
4.4.2 Analyze Data in Excel	81
4.4.3 ChatGPT's Data Analyst plugin	82
4.5 Items Received from Vendors	86
4.5.1 Analyze Mode in Business Central	86
4.5.2 Analyze Data in Excel	87
4.5.3 ChatGPT's Data Analyst	89
4.6 Dissecting Transfers in Business Central using Analyze Mode	90
5. General Ledger Entries Insights	93

5.1	What are General Ledger Entries in Business Central?	93
5.2	What use cases will trigger the system to generate General Ledger Entries?	95
5.3	Assets operations per month	97
5.4	Sales Invoice reflection in the G/L Accounts per Quarter	98
5.5	Income Statement accounts per month	99
5.6	Net changes for G/L accounts	100
6.	Performing Data Analysis on Query objects result sets	102
6.1	Out-of-the-box Business Central queries	102
6.2	New queries upcoming in version 25	104
7.	Copilot and Analysis Assist	105
7.2	Copilot use cases	105
7.2.1	Conversational Chat	105
7.2.2	Create marketing text with Copilot	108
7.2.3	Copilot is capable of suggesting sales lines	109
7.2.4	Faster month-end bank reconciliation	110
7.3	Copilot Analysis Assist	110
7.3.1	Item Ledger Entries: shipments by customer	111
7.3.2	Vendor Ledger Entries: Remaining Amount by Vendor	111
7.3.3	Cash Flow Ledger Entries: cash flow analysis	113
8.	Prohibit Analyze Mode	114
8.1	Prohibit data analysis mode at user level	114
8.2	Prohibit data analysis mode on new page	115
9.	Custom Extracts	117
9.1	Customer Request	117
9.2	Report design	118
9.3	Report source code	119
9.4	Report Output and Ad-hoc Data Analysis	119
	Final Words	122
	Addendum 1	123
	Addendum 2	124
	Addendum 3	126

Preface

Dynamics 365 Business Central is the Enterprise Resource Planning software offered by Microsoft for small and medium-sized businesses.

The product has quite a long history. It was originally developed in Denmark in 1987 under the name Navision. Microsoft acquired Navision in 2002, going through a few name changes, from Dynamics NAV to today's name of Dynamics 365 Business Central, or simply Business Central.

The latest version of Business Central comes as a SaaS offering which means that the software comes pre-installed in Microsoft cloud.

During the Dynamics NAV era, the software came on a CD, and the customer was responsible to choose the hardware and install it, with help from a Microsoft Partner.

Nowadays, the Microsoft 365 tenants come provisioned with Business Central and the customer needs just to set up the system and load their master data (customers, vendors, items, posting setup, etc.). Customers are recommended to work with a partner to set Business Central up in accordance with the way the customer runs its business.

Who this book is for

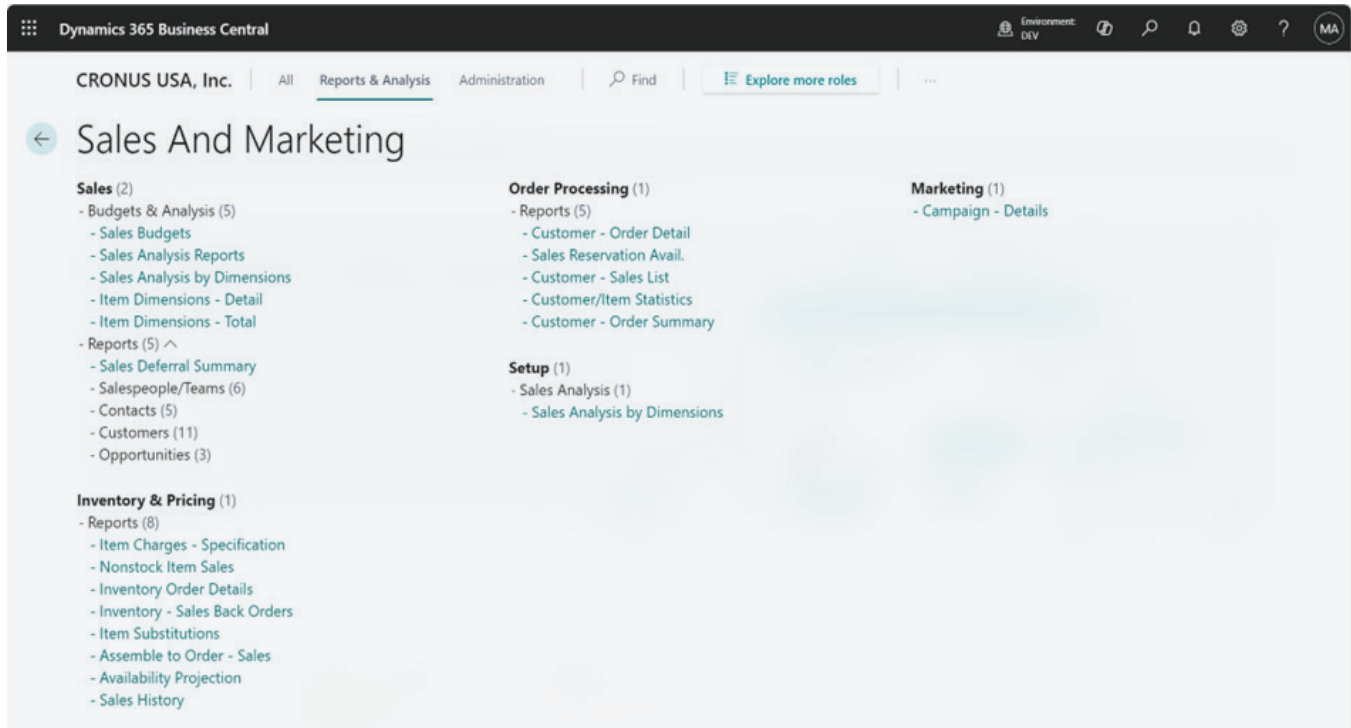
Microsoft Dynamics 365 Business Central offers a range of pre-built reports and analytics tools that can be used immediately, delivering crucial financial insights for various departments.

Business Central users have preferred methods for consuming and analyzing data based on their roles, tailored to the level of data aggregation required.

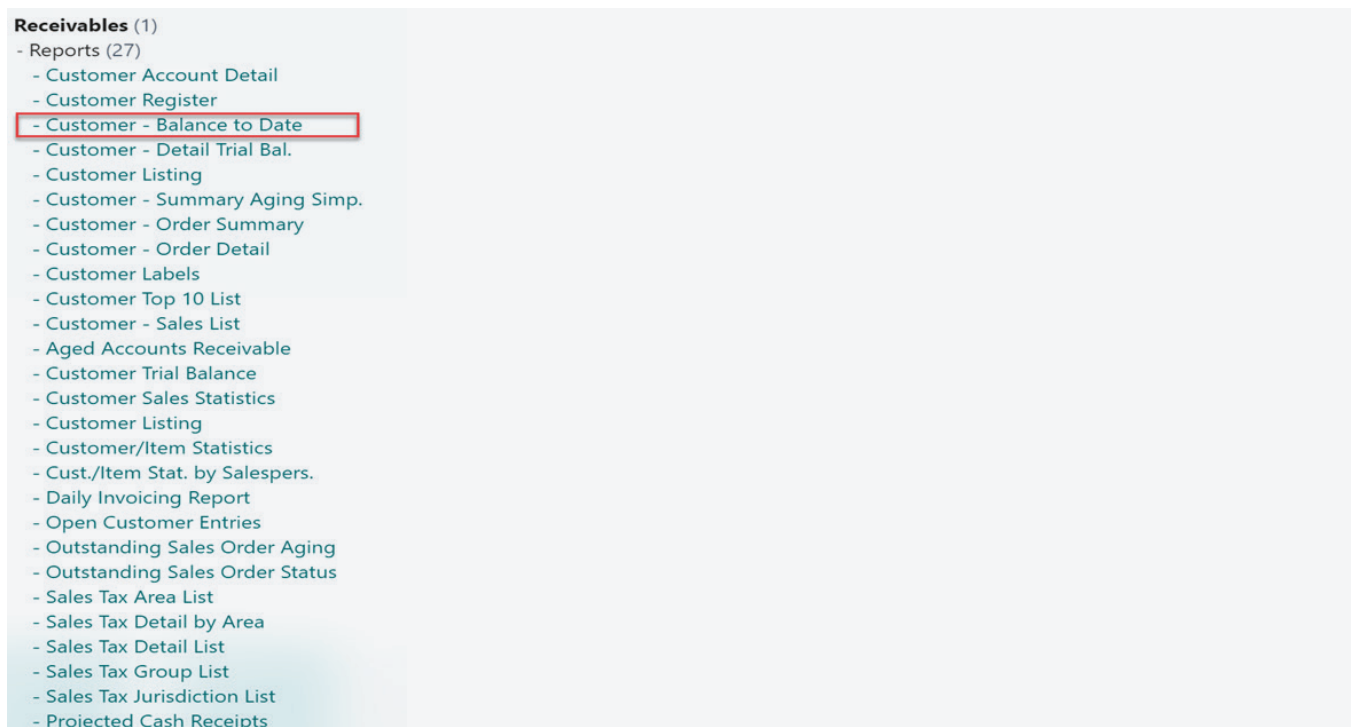
This book is for Business Central or Dynamics NAV users of any level, managers, executives, and technical consultants and various departments including but not limited to: Sales, Accounts Receivables and Payables.

For example, for detailed data, staff in the Accounting or Sales department might use operational reports or on-screen data for detailed data analysis.

Continuing in this tradition Business Central comes with the following Sales related reports:



For Accounts Receivables users, Microsoft includes the following out-of-the-box reports:



One example of a receivables-related out-of-the-box report is “**Customer – Balance to Date.**” When run, the system prompts the user for the following options:

Customer Balance to Date

Printer: (Handled by the browser)

Report Layout: /Sales/Reports/CustomerBalanceToDate.r...
Use default values from: Last used options and filters

Options

Ending Date: 7/23/2024

Show Amounts in \$: ☐

New Page per Customer: ☐

Include Unapplied Entries: ☐

Show Entries with Zero Balance: ☐

Filter: Customer

X No.:

X Blocked:

+ Filter...

Filter totals by:

X Date Filter:

+ Filter...

Advanced >

Send to... Print Preview Cancel

The output can be printed to your local printer, redirected to Excel or generated as a PDF file using the Send To button, and the report shows each customer how much they owe as of the date entered under the “Ending Date” above:

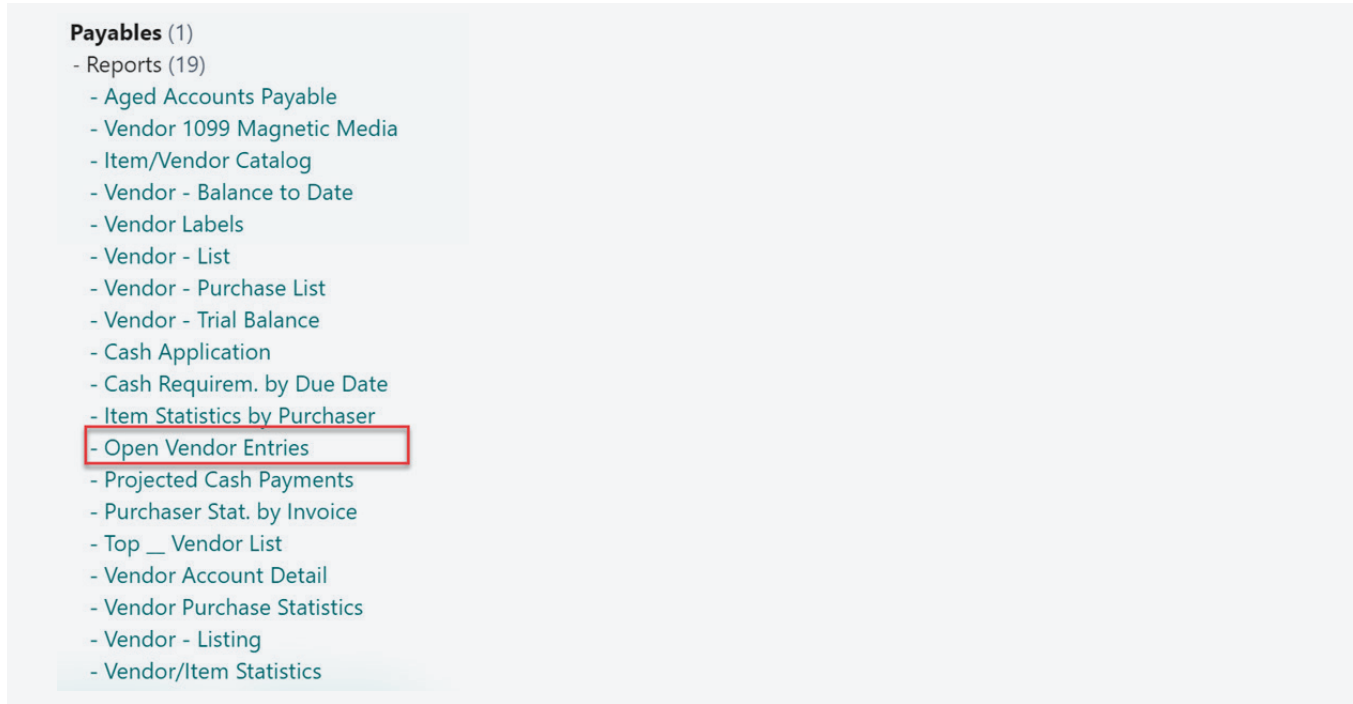
Customer - Balance to Date
CRONUS USA, Inc.

Balance on 07/23/24

Posting Date	Document Type	Document No.	Description	Amount	Entry No.
10000 Adatum Corporation					
03/30/24	Invoice	PS-INV103223	Order S-ORD101018	1,060.85	4376
				1,060.85	
20000 Trey Research					
01/28/23	Invoice	PS-INV103169	Invoice S-INV102169	809.76	1906
02/25/23	Invoice	PS-INV103181	Invoice S-INV102181	1,214.64	2035
03/28/23	Invoice	PS-INV103195	Invoice S-INV102195	1,012.20	2185
				3,036.60	
30000 School of Fine Art					
01/29/23	Invoice	PS-INV103170	Invoice S-INV102170	11,439.05	1919
02/01/23	Invoice	PS-INV103172	Invoice S-INV102172	1,223.33	1937
02/25/23	Invoice	PS-INV103182	Invoice S-INV102182	16,333.12	2048
02/28/23	Invoice	PS-INV103183	Invoice S-INV102183	2,853.48	2059
03/29/23	Invoice	PS-INV103196	Invoice S-INV102196	19,944.69	2198
04/01/23	Invoice	PS-INV103198	Invoice S-INV102198	2,039.85	2216
				53,833.52	
40000 Alpine Ski House					
03/24/23	Invoice	PS-INV103180	Invoice S-INV102180	4,316.92	2028
01/28/24	Invoice	PS-INV103219	Order S-ORD101014	1,000.80	4285
01/28/24	Invoice	PS-INV103220	Order S-ORD101015	1,000.80	4289
03/28/24	Payment	G02002	Application	-960.78	
				20.02	
01/28/24	Invoice	PS-INV103221	Order S-ORD101016	1,000.80	4295
				6,338.54	
50000 Relecloud					
01/31/23	Invoice	PS-INV103171	Invoice S-INV102171	2,877.48	1928
02/28/23	Invoice	PS-INV103184	Invoice S-INV102184	2,877.48	2068
03/31/23	Invoice	PS-INV103197	Invoice S-INV102197	3,081.84	2207
				8,836.80	
C00010 Test					

Accounts Receivables users can also find useful ad-hoc related analysis tips across multiple sections in this book including sections 2.3, 4.4, 5.4, 7.3.1.

Moreover, Accounts Payables staff can leverage the following reports in their daily tasks



One example of an out-of-the-box Payables related report is **Open Vendor Entries**. This is the report page request users will get if they try to run the report:

Open Vendor Entries

Printer: (Handled by the browser)

Report Layout: /Local/Purchases/Reports/OpenVendor...

Use default values from: Last used options and filters

Options

Ending Date: 3/30/2024

Print Amounts in Vendor's Curre...: ☒

Use External Doc. No.: ☒

Filter: Vendor

☒ No.
☒ Search Name
☒ Vendor Posting Group
☒ Currency Code
☒ Payment Terms Code

Filter totals by:

Filter: Vendor Ledger Entry

☒ Document Type
☒ On Hold

Filter totals by:

The output can be printed to your local printer, redirected to Excel, or generated as a PDF file using the drop down if they select 'Print' or using the 'Send As' button at the bottom of the Options page. The report describes documents that are due for payment and credit memos to be applied and how old they have been open for:

Print
Total: 1 sheet of paper

Printer:
Brother HL-L2790DW Printer

Copies:
1

Layout:
☒ Portrait
☐ Landscape

Pages:
☒ All
☐ e.g. 1-5, 8, 11-13

Print on both sides:
Print on both sides

[More settings](#)

Print using system dialog... (Ctrl+Shift+P)

Print **Cancel**

Open Vendor Entries
CRONUS USA, Inc.
(Open Entries Due as of March 30, 2024)

Tuesday, July 23, 2024 7:51 PM
Page 1
ADMIN

Vendor	Date	Type	Number	Description	Phone	Remaining Amount	Currency Code	Due Date	Days Overdue	On Hold	Amount Due
10000				Fabrikam, Inc.	4255550101						
	3/12/2023	Invoice	108201	Invoice 107201		2,071.13		3/31/2023	365		2,071.13
10000				Vendor Total Amount Due							2,071.13
20000				First Up Consultants							
	3/9/2023	Invoice	108196	Invoice 107196		2,214.13		3/31/2023	365		2,214.13
	3/11/2023	Invoice	108199	Invoice 107199		1,255.89		3/31/2023	365		1,255.89
	3/14/2023	Invoice	108203	Invoice 107203		1,433.86		3/31/2023	365		1,433.86
20000				Vendor Total Amount Due							4,903.88
30000				Graphic Design Institute							
	3/10/2023	Invoice	108198	Invoice 107198		1,412.87		3/31/2023	365		1,412.87
	3/15/2023	Invoice	108204	Invoice 107204		725.89		3/31/2023	365		725.89
	3/16/2023	Invoice	108207	Invoice 107207		1,255.89		3/31/2023	365		1,255.89
	3/17/2023	Invoice	108208	Invoice 107208		3,584.92		3/31/2023	365		3,584.92
30000				Vendor Total Amount Due							6,979.57
40000				Wide World Importers							
	3/9/2023	Invoice	108197	Invoice 107197		3,214.34		3/31/2023	365		3,214.34
	3/15/2023	Invoice	108205	Invoice 107205		13,863.53		3/31/2023	365		13,863.53
	3/16/2023	Invoice	108206	Invoice 107206		1,115.23		3/31/2023	365		1,115.23
	4/10/2023	Pay	G04001	Wide World Importers		-11.12		4/10/2023			-11.12
40000				Vendor Total Amount Due							18,181.98
50000				Nod Publishers							

Additionally, Accounts Payables staff can leverage ad-hoc analysis tips included in this book in sections 3.3, 3.4, 4.5, and 7.3.1.

Managers will find tips to quickly identify trends and summarize data or look in detail throughout this book, not only using Ad-hoc analysis, but also Excel Analyze Data and OpenAI Chat GPT various data analyzer plugins.

Executives can find helpful tips on determining expected cash flow using Cash Flow Forecasts (Section 2.3.3), average late payments (Section 2.4), assets operations (Section 5.3), sales results (Section 5.4), analyzing Income Statement accounts (Section 5.5), and General Ledger accounts net change over time (Section 5.6).

Developers and technical consultants can learn that sometimes the data that the customers need does not exist and that a custom extract is sometimes needed (Section 9). Moreover, technical resources will sometimes be asked to prevent ad-hoc analysis for certain users and certain pages or queries. Chapter 8 talks about prohibiting ad-hoc analysis.

Business Central allows users looking for either detailed data or trends and summaries or business performance insights to use not only out-of-the-box reports or ad-hoc analysis, but also to pull Business Central data and build dashboards and reports in Power BI. Power BI allows consultants to build new reports, visualizations, or to merge data from multiple companies. These Power BI dashboards or reports can also be pulled over to display in Business Central as seen below:

