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**Renato Bellu**

Microsoft Dynamics instructor for LinkedIn Learning

# Microsoft® Dynamics 365™

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by Renato Bellu

for dummies®
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## Microsoft® Dynamics 365™ For Dummies®

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# Introduction

Welcome to an exciting new software offering from Microsoft that is destined to change the lives of millions of people all over the globe. As with Office 365, Dynamics 365 is a major release of cloud-based business software from Microsoft that is sure to have a huge impact on the IT industry. It may even profoundly affect your company, your job, and your opportunities for career advancement.

Dynamics 365 is a major release from a major player, Microsoft, which has set the standard in business software for decades and will continue to gain a massive following as it successfully competes with Salesforce.com, SAP, Oracle, NetSuite, and other CRM and ERP (accounting software) developers. Businesses are now increasingly making their inevitable transformation from "on premise" software that you own to online subscription-based "software as a service" that you rent. Dynamics 365 is a topic you need to get acquainted with ASAP so that whenever you come across it in your business career, you can talk intelligently about it and understand how you can prosper from it.

## Who Should Buy This Book

This book is targeted toward four kinds of people like you:

- You are using Dynamics 365 and want to take advantage of its core features, customization options, and workflow and reporting tools, such as Power Apps, Flow, and Power BI, which are included as part of the offering.
- You are tasked with evaluating whether Dynamics 365 is right for your company or your clients.
- Your company or your client has already or is about to migrate to Dynamics 365, and you need to quickly come up to speed on what this software has to offer.
- You are an existing user of "on premise" Microsoft CRM or Microsoft ERP (such as Dynamics AX or Dynamics NAV), and you are eager to learn about the new cloud versions, which have been rebranded and are now part of Dynamics 365.

# About This Book

This book can help you safely and quickly navigate the turbulent and confusing bundle of software that falls under the umbrella of Microsoft Dynamics 365. This software is a bewildering mixture of repackaged products that are already used by millions of users but have only recently been moved to the cloud, as well as a whole host of powerful brand-new applications, tools, and technologies. This book dispels the mysteries surrounding Dynamics 365 — mysteries that cannot be unraveled by reading online reviews or marketing hype, but rather can be cleared up only by a concise, easy-to-understand guide that provides an unbiased picture of what truly comprises Dynamics 365 and what it can do (or can't do) for you and your business.

I've organized this book into five parts.

## Part 1: Doing Great Things with Microsoft Dynamics 365

Part 1 is all about how Dynamics 365 is so much more than just CRM and ERP software. I discuss the benefits of cloud computing, integration with Microsoft Office 365, as well as Power BI (for business intelligence reporting), PowerApps (for point-and-click configuration of custom mobile apps), and Microsoft Flow (for creating cross-application workflows).

## Part 2: Customer Engagement (formerly Dynamics CRM Online)

Part 2 explores the applications that were formerly part of Dynamics CRM Online and now comprise most of Dynamics 365 for Customer Engagement. You will learn how Microsoft has expanded, enhanced, and revamped the Microsoft CRM Online applications for Dynamics 365. Applications discussed include Sales, Customer Service, Project Service Automation, Marketing, and Field Service.

## Part 3: Business Central ERP (formerly Dynamics NAV)

Part 3 is an overview of Business Central, one of two ERP offerings that fall under the Dynamics 365 umbrella. Business Central is geared toward small to mid-sized organizations.

### Part 4: Finance and Operations ERP (formerly Dynamics AX)

Part 4 is an overview of Dynamics 365 for Finance and Operations, the more complex of the two ERP offerings that fall under the Dynamics 365 umbrella. Finance and Operations is geared toward enterprise clients and mid-market organizations.

### Part 5: The Part of Tens

The first chapter in Part 5 provides information about the most exciting capabilities in Dynamics 365. The second dispels common myths associated with cloud computing, business software, and ERP implementations.

## Foolish Assumptions

This book can be read by beginners to Dynamics 365, and it is geared toward the layperson rather than as a guide suitable only for professional computer programmers or business software consultants. Nonetheless, I had to make certain assumptions about you as the reader:

- You are generally familiar with the Microsoft Windows operating system and related Microsoft Office applications such as Excel, Outlook, and Word.
- You are a Microsoft Dynamics 365 user or are interested in becoming one, or in assessing this software for your company or for a client or an associate.
- You are involved in business in some capacity, and you have a general understanding of business terminology, such as customer service and accounts payable.

## Icons Used in This Book

You'll find icons in all *For Dummies* books, and this one is no exception. Each one is a little picture in the margin that lets you know something special about the paragraph it sits next to.

A Tip provides the extra tidbit of information that expands on the topic under discussion, making a useful Dynamics 365 feature even more powerful.

The Remember icon is there to remind you of important points and considerations that may have already been touched on earlier in the chapter.

Take note of the Warning icon when you see it. It's there to alert you to potential pitfalls you may encounter when using, configuring, or assessing the Dynamics 365 software.

Don't let the Technical Stuff icon scare you away from reading this extra information that is of a slightly more technical nature. That being said, if you're in more of a rush, you can safely skip these sections.

# Beyond the Book

In addition to what you're reading right now, this product comes with a handy Cheat Sheet associated with this title. To get the Cheat Sheet, simply go to `www.dummies.com` and search for **Microsoft Dynamics 365 For Dummies cheat sheet** in the Search box.

# 1

# Doing Great Things with Microsoft Dynamics 365

**IN THIS PART . . .**

Taking advantage of cloud technology

Working seamlessly with Dynamics 365 and Office 365

Reporting intelligently with Power BI

Powering up custom apps with PowerApps

Getting Dynamics 365 to flow smoothly with Microsoft Flow

IN THIS CHAPTER

- Rejoicing in the cloud revolution
- Understanding the evolution of Dynamics 365
- Knowing what is included in Dynamics 365
- Transitioning your ERP and CRM to the cloud

# Chapter 1

# Floating on a Secure Cloud

When electricity was first used commercially, a factory that wanted to run electric motors had to build its own power plant on the premises of the factory grounds. Each factory had its own power plant. There were no public utilities for electricity. Nicola Tesla pioneered the first large, centralized, electrical utility company at Niagara Falls, using the force of the falling water for power and converting it to electricity, which would then travel long distances over copper wires to customers using the alternating current (AC) system he devised. Creating a centralized electric utility using alternating current that could travel large distances, instead of Thomas Edison's direct current (DC) system, which was limited to short distances of a few miles, was revolutionary at the time. Companies quickly realized that it made much more sense to simply pay for electricity with a monthly utility bill rather than bother with the trouble and expense of having to maintain their own on-premise equipment for generating electricity.

The same type of revolution is taking place within the computer industry today, where computing power is rapidly becoming a utility that you pay for monthly, and you no longer have to maintain your own local, on-premise computer servers. Rather than buy your own hardware equipment, you pay for a service, and the "utility company" (in this case, Microsoft, IBM, Oracle, Google, Amazon, or Alibaba, to name the major players) takes care of the physical hardware computer

equipment for you at its centralized locations. You connect to its centralized server farms by way of an Internet connection. (A *server farm* is a collection of interconnected computer servers housed together in a single physical location to provide massive computing power for large numbers of offsite users.)

These service providers not only provide disk space for you to save your files but also hosts applications. The hosted applications are installed and upgraded by the centralized provider, so you no longer need to install and upgrade your software; instead, you create user accounts on its system and then simply log in by way of a web page. These hosted applications are referred to as Software as a Service (SaaS) rather than the software products. SaaS is software you rent rather than buy.

Furthermore, you don't need to buy a new computer if you run out of disk space or database space; you simply ask for more space, and it can be quickly partitioned for your use — for a price, of course. Your data is stored on the cloud provider's computer system in communal computers, but separated by software that partitions your data into a separate area that is referred to as your *tenant* or your *instance.* The term *tenant* is now common usage because the SaaS software is rented rather than owned.

This list describes some of the benefits of the SaaS/cloud computing model:

- **You always have the latest software.** The hosted application is continuously upgraded by the SaaS provider. You avoid costly upgrades — and the dreaded problem of falling too far behind in application version.
- **You can add more capacity and increase performance incrementally.** This way, you don't have to purchase, install, configure, and maintain any additional hardware computer equipment.
- **Your data is backed up for you by the cloud computing provider.** Your IT staff doesn't have to purchase backup equipment and configure backup software and backup plans.
- **Your data is more secure from hackers.** Though many company executives worried at first about the security of their data in the cloud, nowadays the prevailing wisdom is that the opposite is true: It may be easier for hackers to attack your data if you're trying to safeguard it by yourself on your own small network rather than relying on the sophisticated security safeguards put in place by large corporations such as IBM, Amazon, Microsoft, and Oracle.
- **Your employees can connect to the cloud applications using an Internet connection from anywhere in the world.** They aren't restricted to getting on a virtual private network (VPN) connection. Most often, cloud applications are mobile enabled so that employees can use them on their smartphones and tablets as well.

Microsoft's cloud service, Azure, is a leader in cloud computing. Public companies such as Microsoft and Amazon don't always break out their revenue numbers in consistent and comparable categories when reporting financial results, so it's hard to tell exactly who is in the lead at any given time. Nonetheless, Microsoft is typically listed in the top three of cloud providers, with IBM and Amazon. As a leader in providing cloud services, with Azure, Microsoft has a powerful and extensive cloud hosting environment. In other words, it has massive computing resources in data centers throughout the globe. When you get Dynamics 365 for ERP (enterprise resource planning) and CRM (customer relationship management), you also get the scalability, performance, security, and tight integration with other Microsoft cloud technologies that comes with Azure. Also, because Microsoft has its own cloud service infrastructure with Azure, it isn't dependent on another company to provide it — and so it isn't affected by another company catching it off guard and changing the rates or technology. That decreases your risk of a compatibility problem between the hosting company and the application development company. With Dynamics 365, the cloud provider is also the app developer.

## Getting Under the Dynamics 365 Umbrella

*Microsoft Office* is the name of the suite of common business productivity applications that includes Word for word processing, Excel for spreadsheets, Outlook for email and scheduling, PowerPoint for presentations, and SharePoint for document management, among other applications. This suite of applications has become a common standard: Most people in the business world now use at least some part of Microsoft Office — especially Outlook — every day, 365 days a year. Microsoft has migrated Office to the cloud, as a subscription-based online Software as a Service suite of applications, and has branded it Office 365.

This move of Microsoft Office from *on premise* to *in the cloud* has proven to be extremely popular, as many organizations have now already transitioned their users from the desktop version of Office to Office 365. The computer network managers at most organizations prefer the online version because it's much easier to manage a link to a website than to install and troubleshoot applications on the individual desktop PCs and laptops of users.

As a follow-up to Office 365, Microsoft came out with a cloud version of its ERP (again, enterprise resource management), which is financial, accounting, and operational software, and combined it with its CRM (again, customer relationship

management), which is sales, marketing, and customer service software. It has branded this combination of ERP and CRM in the cloud as Dynamics 365.

The 365 in Dynamics 365 emphasizes that the software plays nicely with Office 365, and it sure does — it's highly compatible and integrated with Excel, Outlook, and SharePoint, especially. Of course, 365 is the number of days in a typical year, so the name also imparts the constant availability of the software, every single day (even on the 366th day of a leap year).

## Gaining a little historical perspective

The *Dynamics* part of the name Dynamics 365 has quite an interesting history. Once upon a time, two college buddies, Steve Ballmer and Doug Burgum, were roommates at Stanford University. Steve went on to become the CEO of Microsoft, replacing Bill Gates, and Doug founded his own accounting software company in North Dakota called Great Plains. Doug would eventually become the governor of North Dakota. Great Plains started out with a popular character-based (in other words, *nongraphical*) version that ran on IBM compatible PCs on the old DOS operating system. When the Windows operating system was first introduced in the early 1990s, Great Plains created a new software called Dynamics, which was a graphical-based software (you used a mouse and clicked graphical icons) that ran on Windows and, believe it or not, also on Apple Macintosh at the time. (Today's version no longer runs on Apple.)

TECHNICAL STUFF

The original Great Plains Dynamics was written in a proprietary computer language invented by the Great Plains developers called Dexterity. Dexterity was written in the C programming language and was invented to speed up the creation of Dynamics. As it turned out, Dexterity was never used for anything other than Great Plains Dynamics and add-on products designed specifically for Great Plains Dynamics. Therefore, Microsoft has no future plans to continue developing new products using it.

Years later, Great Plains was acquired by Microsoft for over a billion dollars. When Microsoft acquired Great Plains, it picked up Solomon, another popular accounting package. Solomon, well regarded for its project accounting and job costing features, had been previously acquired by Great Plains, before Microsoft acquired Great Plains. Acquiring Great Plains along with Solomon gave Microsoft a strong domestic presence in the ERP market in the United States.

To gain a foothold in the ERP market in Europe, Microsoft acquired Navision, a highly modifiable ERP package with strong manufacturing features. Navision,

founded in Denmark, had previously acquired Axapta, another more robust ERP package, also with extensive manufacturing features, from Damgaard, another Danish software developer.

Microsoft's marketing department, which was quite fond of the Dynamics brand name, extended the brand to other Microsoft software products, including Microsoft's CRM package, originally called Microsoft CRM, and later rebranded as Dynamics CRM. This CRM package wasn't acquired from another company, but rather was developed by Microsoft internally. Microsoft CRM was one of the first packages that Microsoft migrated to the cloud, calling it CRM Online, in order to stay competitive with Salesforce.com, its main CRM rival. Microsoft CRM has captured a large share of the CRM market and is a successful and widely used product.

Microsoft's marketing folks kept using the Dynamics name, eventually rebranding as Dynamics the other three ERP packages that the company acquired and adding a short acronym to distinguish among them.

Microsoft ended up with these four ERP packages — and one CRM:

- Dynamics GP (formerly, Great Plains) ERP – not moved to 365
- Dynamics SL (formerly, Solomon) ERP – not moved to 365
- Dynamics NAV (formerly, Navision) ERP – Business edition in 365
- Dynamics AX (formerly, Axapta) ERP – Enterprise edition in 365
- Dynamics CRM (formerly, CRM Online) – Sales/Service/more in 365

Microsoft realized that maintaining four separate ERP packages with four separate programming code bases, and a CRM package that didn't natively talk to any of the four ERP packages didn't make a whole lot of sense, and certainly didn't provide for a long-term roadmap. Something would have to be done to simplify and unify its business software offerings. To make matters worse, most of the components in these ERP packages weren't web-based applications, but rather were the old-style client/server applications, which don't run on web pages, and instead either need to be installed on each user's computer or else require the users to log in to remote desktops or Citrix sessions, which is rather inconvenient and cumbersome to maintain for the IT department. The Microsoft ERP software needed to be migrated from client/server to web based. Fortunately, Microsoft CRM had been built from the ground up as a web-based application, so at least that didn't need as much revision as the ERP software.

# Reading the roadmap for Microsoft ERP and CRM

Microsoft needed to come up with a strategy for their business software solutions that would address the problem of having four unrelated, redundant, on-premise ERP offerings, with insufficient interoperability between their CRM and ERP solutions to boot. To address these problems Microsoft devised a fourfold strategy:

1. **Move to the cloud because everybody is moving to the cloud, for many compelling advantages, especially the easier start-up.**

   Customers want the ease of setting up and maintaining a software infrastructure for their ERP and CRM systems, and of course it's much easier if the software vendor — in this case, Microsoft — handles all that for them. In other words, the systems are hosted by Microsoft, so you just surf to a web page, which is so much easier than buying servers, configuring them, installing software, creating backup plans, and on and on. Customers also prefer to rent instead of buy the software, because they can avoid having to shell out lots of money up front, even if it may end up costing them more money in the long run, which isn't necessarily the case, either.

2. **Modify several existing Microsoft applications to be web enabled rather than client/server, if they weren't already web enabled, and then combine them into a large, unified offering with a common look and feel, and a common brand name, Dynamics 365.**

   Microsoft already had several good applications, so rewriting an ERP and CRM from scratch would have been reinventing the wheel (not to mention that it would be impractical to do so). ERP and CRM systems are so packed with features and capabilities that they take many years, even decades, to develop and evolve to the level where they can address the needs of complex organizations.

3. **Provide a simplified license that allows you to get all (or at least, most of) this combined software for one combined cost per user, as a subscription SaaS offering.**

   The advantage to Microsoft here is that subscription-based revenue is preferred by stockholders because it tends to even out the revenue, providing steady and reliable profits year after year. The advantage to customers, dealers, and Microsoft is that obtaining Dynamics 365 involves less upfront cost and avoids the complexity of customers and dealers having to pick through a confusing menu of available modules to determine a price. Instead, a few basic plans include almost all the software.

4. **Program these applications to have tight integration to other, more general Microsoft applications, tools, and technologies, such as Microsoft Office 365, Power BI, PowerApps, Common Data Service, and the like.**

   Doing so increases the usefulness of the software and makes it more appealing to customers who already have a large investment in Microsoft products.

## Asking what's in the Dynamics 365 "sausage"

Microsoft's solution to its CRM/ERP roadmap problem was to create a SaaS subscription-based offering, available exclusively on Microsoft's cloud service, Azure. It combines CRM with ERP along with tight integration to Office applications such as Excel, Outlook, and SharePoint as well as a few other applications, plus other, newer Microsoft tools and technologies such as PowerApps for building mobile and web apps, and Power BI for business intelligence reporting.

REMEMBER

Dynamics 365 is a true SaaS solution; in other words, it's not available on-premise; you can only run it in the cloud, just like Salesforce.com, Workday, Oracle's NetSuite, and many other, newer competing CRM and ERP choices now prevalent in the marketplace.

In an effort to be all things to all people, Microsoft has jam-packed the capabilities that are included under the Dynamics 365 umbrella, extending the reach from ERP and CRM to FSA, PSA, HR, and POS.

See Table 1-1 for a clarification of what all this alphabet soup of acronyms actually means.

**TABLE 1-1** Acronyms Related to Dynamics 365

| Acronym | Stands For | Represents |
|---|---|---|
| ERP | Enterprise Resource Planning | Accounting software |
| CRM | Customer Relationship Management | Sales and customer service |
| FSA | Field Service Automation | Field technicians management |
| PSA | Professional Service Automation | Timing and billing/Project accounting |
| HR | Human Resources | Employee onboarding |
| POS | Point of Sale | Retail store software |

Dynamics 365 is composed of the following major pieces:

- **Dynamics AX ERP:** Rebranded as Dynamics 365 for Finance and Operations, Enterprise edition (for larger organizations)

  Or, alternatively, for ERP you can choose a simplified version of Dynamics NAV ERP, rebranded as Dynamics 365 Finance and Operations Business edition (for smaller organizations)

- **Dynamics CRM:** Rebranded as Dynamics 365 for Sales, including Sales Force Automation, Customer Service, and Marketing
- **FieldOne:** A CRM add-on that was acquired by Microsoft and became CRM Field Service and CRM Resource Scheduling
- **Project Service:** Another CRM module that is a project accounting/time-and-billing application
- **Talent:** A separate application that is human resources (HR) software for employee onboarding and has a self-service portal, employee benefits management, and so on
- **Retail:** Another separate application that is a point-of-sale (POS) system used for retail store operations

Dynamics 365 also has tight integration with a whole host of Microsoft technologies, including SharePoint, Excel, Outlook, PowerApps, Power BI, and the Common Data Service.

Dynamics GP (formerly Great Plains) and Dynamics SL (formerly Solomon) are both widely adopted ERP packages, especially in the United States. Microsoft is still maintaining, and to some limited degree, enhancing these products due to continued customer demand. Though it's true that many customers do not want to migrate from these products because of the large investment of time and money spent in the complex configuration and modifications they have made to the core systems, Microsoft's R&D dollars and focus are clearly skewed toward favoring Dynamics AX (now Dynamics 365 Finance and Operations Enterprise editions). Microsoft's vision is that AX is the future product to compete with its main rivals, such as Oracle and SAP. GP and SL are sometimes referred to as *sunset* products because they will eventually be phased out by Microsoft. However, the ERP world moves at a glacial pace because of the complexity and the mission-critical nature of the beast. In all likelihood, GP and SL will be around for many years to come, because of customers refusing to migrate.

Microsoft keeps rebranding its business software, and frankly, that can become confusing to the consumer. Of course, the seemingly endless rounds of renaming are for the purpose of staying current with buzzwords and trends, and are an

honest attempt to clarify what the software is designed to do. To help you see clearly through this foggy haze, I have created Table 1-2, which lists the major software applications that have evolved into Dynamics 365.

**TABLE 1-2** The Move to Dynamics 365

| Type | Original Developer | What It Is | Rebranded as Dynamics 365 |
|---|---|---|---|
| ERP | Damgaard | Dynamics AX (Axapta) | Finance and Operations Enterprise edition |
| ERP | Navision | Dynamics NAV | Business Central |
| CRM | Microsoft | Sales Force Automation | Sales |
| CRM | Microsoft | Customer Service | Service |
| CRM | Microsoft | Marketing Automation | Marketing |
| FSA | FieldOne | Field Service Automation | Field Service |
| PSA | Microsoft | Project Service Automation | Project Service |
| FSA | FieldOne | Technician Scheduling | Resource Scheduling |
| HR | Microsoft | Human Resources | Talent |
| POS | Microsoft | Point of Sale | Retail |

## Standardizing the tools and terminology

As the software that comprises the origin of Dynamics 365, such as Damgaard Axapta, has evolved over decades, and eventually became part of Dynamics 365, Microsoft has spent a tremendous amount of time, effort, and money to modernize it on the one hand and to standardize it to fit into the overall Microsoft environment of operating systems, databases, and development tools on the other so that Microsoft offerings would have a consistent look and feel. The work of thousands of software engineers has transformed the software to a point where it's barely recognizable from what it started out as.

For example, Axapta (which become Dynamics AX) is customized using a proprietary tool unique to AX called the Application Object Tree (referred to as the AOT). Mastering the AOT was essential to becoming skilled in the customization of Dynamics AX. In Dynamics 365, the proprietary AOT has been done away with. Instead, Microsoft has substituted a more mainstream standard Microsoft tool — namely, Visual Studio. In Dynamics 365, you use the Application Explorer in Visual Studio to look under the hood of AX and manipulate the programming objects that make up the new Dynamics 365 cloud-enabled version of AX, Dynamics 365 for

Finance and Operations Enterprise edition. Microsoft has changed the proprietary terminology of the AOT to the standard terminology of Visual Studio, the application used by programmers to code computer programs using Microsoft programming languages, such as .NET. In other words, as Microsoft has taken existing applications, such as Dynamics AX, and transitioned them into Dynamics 365 components, the applications have been made to conform to overall Microsoft terminology and technology standards.

Table 1-3 lists the terminology standardizations Microsoft made when migrating the Dynamics AX Application Object Tree (AOT) from AX to Dynamics 365 Finance and Operations Enterprise edition.

**TABLE 1-3** Moving from Dynamics AX to Dynamics 365

| Dynamics AX Application Object Tree | Visual Studio Application Explorer |
|---|---|
| Data Dictionary | Data Model or Data Types |
| Classes | Code |
| Macros | Code |
| Forms | User Interface |
| Menus | User Interface |
| Other GUI Elements | User Interface |
| Business Intelligence Components | Analytics |

# Transitioning to the Cloud

If you're an existing user of one of the software packages that has been incorporated into Dynamics 365, you may be wondering how the release of Dynamics 365 will affect you and your organization. Clearly, it's Microsoft's goal to retain you as a customer, and also to encourage you to migrate to Dynamics 365 as soon as possible. Microsoft's long-term ERP/CRM strategy is to focus its research-and-development efforts on its cloud offering, which is what it will use to compete against archrivals Oracle and SAP. The sooner its customers move to the cloud offering (Dynamics 365, in other words), the less effort and expense needs to be diverted to maintaining older, *sunset* products, and the better the cloud offering will become. (The unspoken assumption here is that, yes, the better the offering, the more it can gain market share against Oracle, SAP, and newer rivals such as Workday and Salesforce.com.)

Many customers of earlier Dynamics versions — the ones that predate Dynamics 365 — are *midmarket* organizations: They have hundreds, if not thousands, of employees, and hundreds of millions of dollars in annual revenue or budget, if not billions. These large organizations — which may be privately held or publicly traded for-profit companies, not-for-profit charities, or city, state, or federal government public sector agencies — are sometimes referred to as *enterprise* clients. Smaller companies, charities, and government agencies are sometimes referred to as *SMB* clients — short for *s*mall and *m*edium-size *b*usinesses. These clients are said to fall within the SMB space, as opposed to the enterprise space.

Implementations of pre-365 Microsoft CRM or AX or NAV ERP at enterprise clients typically include extensive modifications to the out-of-the-box screens, lots of customized reports, and complex custom integrations that were added to electronically import or export transactions into or out of Dynamics from or to external applications. Big organizations have complex ERP and CRM configurations. Migrating these to the Dynamics 365 cloud isn't a simple matter, and it won't happen overnight.

Microsoft certainly cares about these big enterprise clients who, after all, have high user counts and therefore mean big money to Microsoft. Given that fact, it makes sense that Microsoft encourages migration to the cloud, but won't force it on its customers. The transition in the enterprise space will be piecemeal, and will happen over the course of several years. Transitioning to the cloud in the SMB space will be easier because SMB implementations have fewer customizations — but then again, SMB organizations have fewer human resources and less financial wherewithal to deploy toward changing their IT systems than enterprise organizations do. Either way, transitioning your Dynamics system to the Dynamics 365 cloud will take careful planning and plenty of patience.

REMEMBER

Microsoft CRM Online is now part of Dynamics 365, and because Microsoft CRM was always a web-based product from day one, and because it was the first major business application of Microsoft's to be transitioned to a SaaS cloud solution, the transition from CRM Online to Dynamics 365 is easier than transitioning an on-premise installation of Dynamics AX ERP to the cloud. Transitioning CRM Online to Dynamics 365 is primarily a matter of switching your user licenses.

## Understanding the difference between hosted client/server and true SaaS

Dynamics GP, Microsoft's sunset ERP package, is a client/server application, not a web-based SaaS offering. However, for many years now, application service providers, or ASPs (an older term meaning cloud providers), have been offering hosted environments for Dynamics GP and other non-SaaS applications. What they

do is install the client/server application on their own remote server farms on application servers. They will use *virtualization* as well, in which the servers aren't necessarily physical boxes, but rather only virtually simulated physical computer servers. You then log in from your organization to the application service provider's remote server to run your ERP application. The SQL database is likewise on a virtual server on the application service provider's system. This hosted application setup is very common and has many of the same benefits of a true SaaS solution; however, it's not true SaaS, as will soon become clear. To make matters even more confusing, these non-SaaS applications, such as Dynamics GP, are sometimes hosted on the Microsoft Azure cloud. To make matters yet more confusing, the Azure cloud provider can be Microsoft itself, or another IT company that is renting space on Azure from Microsoft.

Most of the application service providers (ASPs) offer the same kind of subscription models that involve a monthly user fee, instead of having to purchase the software up front. So in that sense, the hosted client/server software is like SaaS. Also, the ASP takes care of backups and database maintenance and owns the actual hardware (or perhaps rents space on another company's hardware). Though an ASP-hosted application seems like a true SaaS application, it is not, because the software application itself wasn't initially designed to run over the Internet, nor was it designed to have multiple unrelated organizations using the same version of the software at the same time, in a similar way to different renters or tenants living in the same apartment building. In the case of a hosted client/server application, the implementation of it is still your own separate install of the application, which is different and totally disconnected from the installations of other organizations that the ASP is also hosting. Old-school client/server-style applications that predate the cloud, but are now being hosted in the cloud, weren't designed from the ground up as a true multi-tenant architecture, and so, unfortunately, they still need to be upgraded independently.

True SaaS software is typically software that was built for being rented by several tenants, and was designed to be run over the Internet and on mobile Internet devices, rather than an older style client/server application that is running on a remote server. True multi-tenant SaaS software is upgraded by the cloud application provider, and all tenants gain the benefits of the new version automatically at the same time. As shown in Figure 1-1, the separate companies, as well as their separate environment tiers, are treated as tenants within the same application building. To use an analogy, if an apartment building gets a new furnace, for example, all the tenants receive the benefit of improved heating right away.

TIP

Best practices for changing any IT system recommends using different environments, sometimes referred to as *tiers*. Ideally, your organization has at least three tiers for your CRM or ERP system.

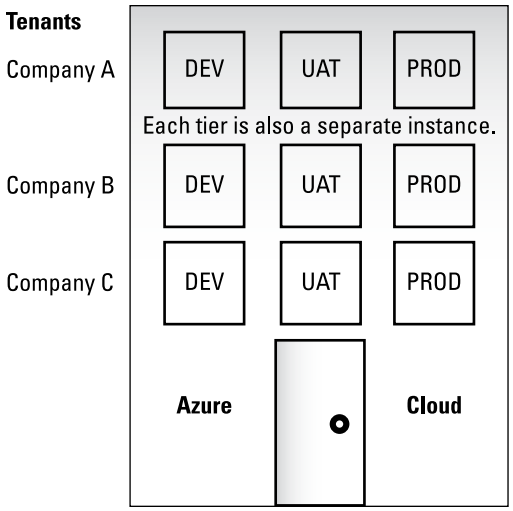


**FIGURE 1-1:** True SaaS software is typically a multi-tenant architecture.

Typical CRM/ERP environment tiers are described in this list:

- **DEV (Development):** Where the programmers play
- **UAT (User Acceptance Testing):** Where the users test the system
- **PROD (Production):** The actual live system

The UAT tier or DEV tier is sometimes referred to as a *sandbox,* or a place to play around with scenarios without corrupting the live production system. Sometimes the sandbox is loaded with demo data rather than a copy of your organization's data so that you can work with an unmodified, out-of-the-box version of the software for testing purposes. Software training may be accomplished using the UAT tier, or perhaps you may have an additional tier called TRAIN. Also, sometimes there's a tier called PRE-PROD, which is a last stop of IT system testing before promotion to PROD.

Dynamics 365 is a true SaaS solution, even though all the pieces, such as Dynamics AX (formerly Axapta) didn't start out that way. Microsoft has taken the trouble to rewrite the code so it works in a true multi-tenant SaaS environment. Microsoft can provide as many tiers as your organization requires so that you can develop, test, train, and run your application safely.

## Migrating from Dynamics GP or SL to Dynamics 365

Dynamics GP (formerly known as Great Plains) and Dynamics SL (formerly known as Solomon) aren't part of Dynamics 365. If your organization is running

Dynamics GP or SL (both, for the most part, client/server applications) and you want to migrate your ERP system to the cloud and at the same time stick with Microsoft, you have to choose between the Dynamics 365 Finance and Operations Enterprise edition (formerly Dynamics AX) and Business Central (formerly Dynamics NAV), previously referred to in Dynamics 365 as Finance and Operations, Business edition.

If you believe that your organization is likely to experience growth and increased complexity over the years, a safer choice is the Dynamics 365 Finance and Operations, Enterprise edition, which is much more feature rich than Business Central and was designed to be more of a global enterprise solution. NAV itself is a feature-rich application, but not quite on the level of AX.

When Microsoft originally migrated Dynamics NAV to the cloud to become Dynamics 365 Business edition, it did not include all the preexisting NAV features; however, more recently Microsoft moved all the NAV features to the cloud version, when rebranding it as Business Central. At one point, it was unclear how much of NAV would eventually make its way to the cloud. It seemed that Microsoft may have been intending to keep the Business edition relatively clean and simple, a bit more like QuickBooks than a full-blown NAV, so that it could satisfy the SMB (small to midsize business) requirements and be easy to implement. But Business Central isn't just another QuickBooks Online, nor is it trying to be like SAP, a huge global ERP for the Fortune 500. Business Central is a good middle ground in the ERP landscape.

Dynamics GP and Dynamics SL tend to get fairly complex, but Business Central may be able to handle your ERP requirements. It all depends on what modules and features you're using in GP or SL. If you have complex ERP requirements that demand a global enterprise solution, the Finance and Operations Enterprise edition (formerly Dynamics AX) is probably the way to go.

REMEMBER

Whatever edition you choose, if you plan to migrate from GP or SL to Dynamics 365, it would be prudent to consider such a project to be, in essence, complete ERP reimplementation of a new ERP package rather than an upgrade or simple migration that can be accomplished using a wizard application. Though it's true that Microsoft has created some data migration wizards that can be useful for the data conversion aspect of the project, data conversion is only one part of the ERP implementation puzzle. There is custom reporting, module configuration, screen customizations, process and workflow re-engineering, integrations, and more to consider. You will most likely need the assistance of a consulting firm that is an authorized partner for Dynamics 365, who can propose an implementation plan, and provide an estimated budget and timeline to complete the project. It's very unrealistic to think you can just click a few buttons and move from GP or SL to Dynamics 365; rather, you will be looking at a full blown ERP implementation project.

# Migrating from Dynamics CRM or CRM Online to Dynamics 365

If you're an existing customer of Dynamics CRM Online and you want to keep using Microsoft's CRM software, you won't have a choice about whether to migrate to Dynamics 365; you will have to do it. Because you're already in the cloud, your software is continuously being upgraded by the cloud provider — in this case, Microsoft. Microsoft has, in essence, upgraded CRM Online to Dynamics 365. Your CRM Online subscription will expire, and for you to be able to continue using the software, you will need to switch to a Dynamics 365 license. If you don't switch to a Dynamics 365 license, your CRM Online will eventually be disabled by Microsoft. However, there's no reason not to switch licenses because, after all, you will want to be on the latest version, and benefit from the newer user interface, expanded features, and improved integration with Microsoft Office.

REMEMBER

Microsoft Dynamics CRM Online is pretty much already Dynamics 365, in the sense that CRM Online is cloud based. This is the easiest of all the Dynamics 365 migrations, and it's primarily a license change. To make the transition even easier, Microsoft has created a wizard to switch your user license plans, called the Switch Plans Wizard.

To migrate your license from Dynamics CRM Online to Dynamics 365, using the Switch Plans wizard, follow these steps:

1. **Sign in to Office 365 at office.com with the account that has admin permissions.**
2. **Click the app launcher icon in the upper-left and click to select the Admin tile.**

   The Admin tile appears only to people who have Office 365 admin permissions. If you don't see the tile, then you don't have permissions to access the admin center for your organization.
3. **Click Billing.**

   A drop-down menu appears.
4. **Choose Subscriptions.**
5. **Select the plan you want to renew, and click the Switch Plans button.**
6. **Click the Buy Now button on the plan you want to buy.**

   Talk with your Dynamics 365 authorized partner to learn about the various plans, and decide which plan is right for you.

After the license change, you will notice that the software looks slightly different. Menus and buttons are in different places, and some items may use different terminology. There's definitely a learning curve involved in getting up to speed on Dynamics 365.

You will want to make the license change in a lower tier (development or testing) environment. If your organization has access to a user acceptance testing (UAT) environment, the license change can be applied there first. Users can train and test on the software before actual cut over, when the license is applied in the PROD (production) live tier.

TIP

If you're running an earlier version of Dynamics CRM, one that is perhaps an on-premise version, your CRM software is (unfortunately) not already cloud based. The migration to Dynamics 365 will involve more steps. Confer with your Dynamics 365 authorized partner on developing an upgrade plan.

## Migrating from Dynamics AX to Dynamics 365 Enterprise edition

Dynamics AX (formerly known as Axapta) has evolved into Dynamics 365 for Finance and Operations Enterprise edition. However, that doesn't mean you can simply upgrade your software license as you can with Microsoft CRM Online, to migrate your existing AX software to the Microsoft Azure cloud. Unlike CRM, AX wasn't originally developed as a web-based application, and unlike CRM, AX wasn't previously migrated by Microsoft to an online version. In other words, there was never an AX Online, like there was a CRM Online. Furthermore, AX is a much more complicated application than CRM, because it's a full-featured accounting and financial system that has a much broader depth of functionality, encompassing accounts payable, accounts receivable, inventory, supply chain, financial reporting, general ledger, warehouse management, manufacturing, and so much more.

In migrating AX to 365, you will need to plan for a full-blown ERP implementation project, not a simple upgrade. That being said, Microsoft, in some of its literature, does refer to the migration of AX to Dynamics 365 for Finance and Operations Enterprise edition as an upgrade or as an upgrade path. Keep in mind that it isn't an upgrade in the sense of running an upgrade wizard application, but rather a complicated series of steps that will require analysis, decision making, and, most likely, some level of redesign.

Microsoft is justified in referring to the migration of Dynamics AX 2012 as an upgrade path, although a complicated one, because it does provide automated programs to migrate the data. Data upgrade is accomplished using a deployable

package, which is similar to the mechanism used to deploy new code from one environment (tier) to another.

TIP

Fortunately, Microsoft has provided extensive tools and documentation designed to assist you and your Dynamics AX authorized partner in migrating your Dynamics AX ERP to Dynamics 365 for Finance and Operations Enterprise edition in the Azure cloud. These tools include an upgrade analyzer tool, a code upgrade estimation tool, and a project methodology. Ask your authorized partner about how to access and deploy these tools.

TECHNICAL STUFF

In order to help clients map out a transition plan, Microsoft has come up with Dynamics Lifecycle Services (LCS, for short. With LCS, Microsoft has designed project methodologies for various Dynamics-related projects. A project methodology called Upgrade AX 2012 to Dynamics 365 for Finance and Operations describes the three phases (analyze, validate, and execute) that are recommended by Microsoft, and it provides links to the applicable documentation.

The *upgrade analyzer* is a tool that you can run against your existing AX 2012 environment. The output of the upgrade analyzer tool provides information about these options:

- Data Cleanup
- SQL Configuration
- Deprecated Features

The upgrade analyzer provides information that may be useful in planning your upgrade, but it doesn't actually upgrade anything. Also note that it points out *deprecated* features — features that were available in Dynamics AX but are no longer available in Dynamics 365. Microsoft is discontinuing some functionality from AX, so it may be impossible to migrate all your AX data, because some of the database tables will not even exist in the cloud. Nonetheless, it's still a good idea to migrate to the cloud because, although your setup may lose some features, it will be sure to gain many new features and have tighter and more standardized integration with other Microsoft technologies — and it will be taking advantage of all the benefits of multi-tenant cloud computing.

## Migrating from Dynamics NAV to Dynamics 365 Business edition

Dynamics NAV (formerly known Navision) is a full-featured ERP package, deployed by customers mostly as an on-premise solution. Dynamics NAV is more widely adopted in Europe than in the United States. It's generally believed that

Dynamics NAV has a better manufacturing capability than Dynamics GP or Dynamics SL, and that it's easier to customize than GP or SL because it has more flexible and user-friendly customization tools.

NAV, unlike GP and SL, has been ported to the cloud and has been rebranded as Business Central, though it's also referred to as Dynamics 365 for Finance and Operations Business edition. Though the marketing folks at Microsoft have been making product name changes that are hard to keep up with, to clarify this one, just think of the baby ERP as Navision and the big boy ERP as AX. The baby ERP isn't the full-blown NAV because NAV is a fairly complex application with loads of features. NAV has been reduced to the most essential features before being ported to the cloud to become Business Central. Whether Microsoft will continue to add features and capabilities to Business Central to bring it on par with NAV isn't yet known; it may choose to keep it relatively simple.

Unlike AX, Microsoft has not touted an upgrade path from the on-premise Dynamics NAV to the cloud Business Central. This may be because Business Central is a stripped-down version of NAV, so it's not really possible to migrate most of it anyway. The rule of thumb is that if you have an extensive implementation of on-premise Dynamics NAV and you want to migrate your ERP to the cloud, you should probably consider a full-blown ERP implementation of Dynamics 365 for Finance and Operations Enterprise edition (in other words, move to AX in the cloud). Enterprise edition will have the manufacturing features or other complex features you may be looking for. Consult with your authorized Dynamics partner for more information on migrating from NAV to Dynamics 365.

IN THIS CHAPTER

- Managing users, subscriptions, and passwords in the Admin Center
- Emailing within Dynamics 365 using Outlook integration
- Working with spreadsheets within Dynamics 365 using Excel integration
- Organizing documents within Dynamics 365 with SharePoint and OneDrive
- Handling messaging with Skype for Business

# Chapter 2
# Extending Your Reach with Office 365

If your organization is considering purchasing subscriptions for Microsoft Dynamics 365, you should also consider Microsoft Office 365. Chances are good that your organization already has migrated to Office 365, before implementing Dynamics 365. In any case, ideally, your users have both subscriptions — Office 365 and Dynamics 365 — because the integration between them is extensive and powerful. The subscriptions are separate, but the software is very much connected.

## Working with the Admin Center

One of the greatest selling points for signing on to both Microsoft Dynamics 365 and Microsoft Office 365 is the method that Microsoft has devised for administrators to manage Dynamics users — namely, by logging in to the Office 365 Admin