

SOLUTIONS

Microsoft Dynamics RoleTailored Business Productivity “Software Designed For Your People”

White Paper

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<http://www.microsoft.com/dynamics>



Breakthrough Business Productivity Designed Specifically For Your People



Overview

Businesses don't garner insights or make decisions. Businesses don't close deals, invent new products, or find new efficiencies.

People do.

Companies excel when they empower their people to drive the business forward. Strategies, organization, motivation, and leadership all set the stage for business success. But to see results, you also have to give your people the right tools, information, and opportunities—because success ultimately comes down to your people. We call a business that fosters a winning environment a “people-ready business.”

Software is instrumental to the people-ready business. Software is increasingly how we harness information, the lifeblood of business today. Software enables people to turn data into insight, transform ideas into action, and turn change into opportunity.

Microsoft is building the next generation of breakthrough business applications designed to amplify the impact of your people.

Contents

- INTRODUCTION..... 4**
- BUILDING A CLEAR CUSTOMER UNDERSTANDING..... 7**
- THE MICROSOFT DYNAMICS CUSTOMER MODEL..... 8**
 - DEFINITION OF THE CUSTOMER MODEL8
 - UTILIZING THE CUSTOMER MODEL.....9
- REFLECTING THE MODEL IN SOFTWARE..... 10**
 - MICROSOFT DYNAMICS CLIENT 10
 - MICROSOFT OFFICE AS A PRIMARY INTERFACE 14
 - Integrated User Experience*..... 14
 - Microsoft Dynamics Snap**..... 15
 - Functional Integration**..... 17
 - BUSINESS PORTAL 19
- PROGRESS AND ROADMAP 21**
- APPENDIX 1 – MICROSOFT USABILITY RESEARCH 22**
 - Lab Studies*..... 22
 - Site Studies* 22
 - Usability Labs*..... 23
 - The Observer Side* 23
 - The Participant Side* 24
 - CONVERGENCE USER EXPERIENCE LOUNGE..... 24
- APPENDIX 2 – CUSTOMER MODEL 26**
 - OPERATIONS 26
 - FINANCE 32
 - SALES AND MARKETING 35
 - IT & PARTNERS 38
 - HUMAN RESOURCES 39
 - SMALL BUSINESS..... 42
- APPENDIX 3 – EXAMPLE OF THE PERSONA DETAILED VIEW 43**
 - VINCE – OPERATIONS MANAGER..... 43
 - Demographics*..... 43
 - Work*..... 43
 - Psychographics* 45
 - Get to Know Vince* 45
 - A day in the life*..... 46
 - Primary Roles*..... 47
 - Secondary Roles*..... 48
 - APRIL – ACCOUNTS PAYABLE COORDINATOR..... 49
 - Demographics*..... 49
 - Work*..... 49
 - Psychographics* 51
 - Get to Know April* 51
 - A day in the life*..... 51
 - Primary Roles*..... 52
- APPENDIX 5 – REFERENCES 54**

"The software challenges that lie ahead are less about getting access to the information people need and more about making sense of the information they have—giving them the ability to focus, prioritize and apply their expertise, visualize and understand key data, and reduce the amount of time they spend dealing with the complexity of an information-rich environment."



Bill Gates
Chairman and Chief Software Architect
Microsoft Corporation

Introduction

Over the past decade, software has evolved to build bridges between disconnected islands of information and give people powerful ways to communicate, collaborate and access the data that's most important to them.

But the software challenges that lie ahead are less about getting access to the information people need, and more about making sense of the information they have.

To tackle these challenges, business software needs to evolve. It's time to build on the capabilities we have today and create software that helps people adapt and thrive in an ever-changing work environment. Advances in pattern recognition, smart content, visualization and simulation, as well as innovations in hardware, displays and wireless networks, all give us an opportunity to re-imagine how software can help people get their jobs done.

This is an important goal not only because the technology has evolved to make it possible, but also because the way we work is changing.

Now more than ever, competitive advantage comes from the ability to transform ideas into value -- through process innovation, strategic insights and customized services. We are evolving toward a diverse yet unified global market, with customers, partners and suppliers that work together across cultures and continents. Business is becoming more transparent, with a greater need to ensure accountability, security and privacy within and across organizations.

All of these changes are giving people new and better ways to work, but they also bring a new set of challenges: a deluge of information, constant demands on their attention, new skills to master and pressure to be more productive.

A recent study showed that 56 percent of workers are overwhelmed by multiple simultaneous projects and interrupted too often; one-third say that multi-tasking and distractions are keeping them from stepping back to process and reflect on the work they're doing. In the United Kingdom, it's estimated that stress accounts for nearly one-third of absenteeism and sick leave.

Finding the information people need to do their jobs is too difficult. The software innovations of the 1980s and 1990s, which revolutionized how we create and manipulate information, have created a new set of challenges: finding information, visualizing and understanding it, and taking action. Industry analysts estimate that information workers spend up to 30 percent of their working day just looking for data they need. All the time people spend tracking down information, managing and organizing documents, and making sure their

teams have the data they need, could be much better spent on analysis, collaboration, insight and other work that adds value.

At Microsoft, we believe that the key to helping businesses become more agile and productive in the global economy is to empower individual workers -- giving them tools that improve efficiency and enable them to focus on the highest-value work and a new generation of software is an important ingredient to make this happen.

Within the Microsoft Dynamics Research & Development group specifically, our implementation of this is "RoleTailored productivity" and it is the key software strategy that enables the people-ready business by combining the worlds of business process automation and personal productivity

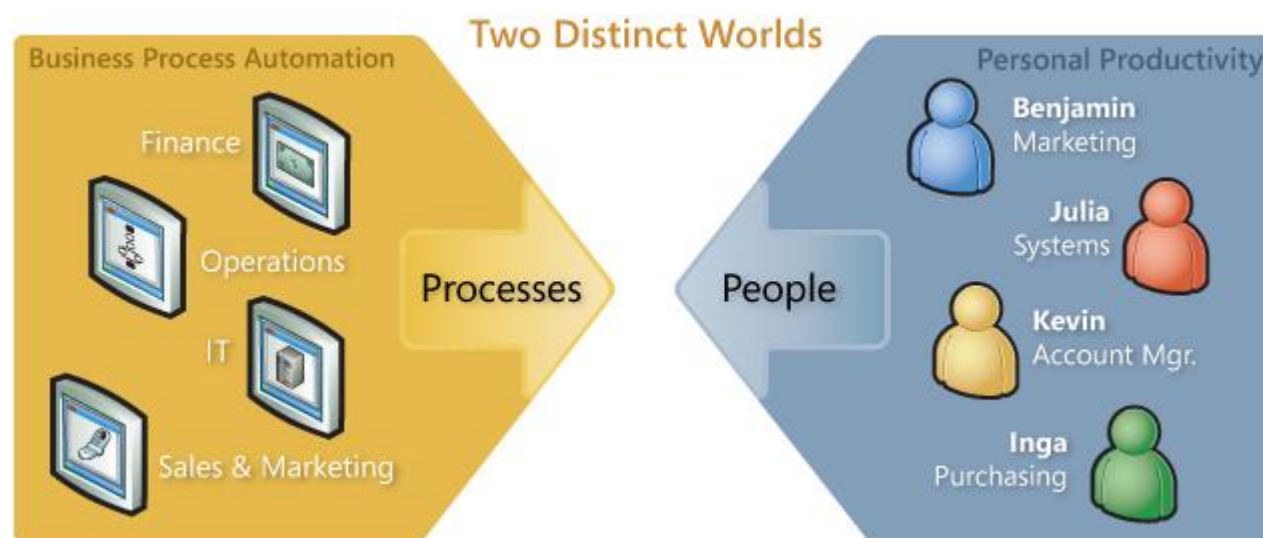


Figure 1: The worlds of business process and personal productivity

Until now, organizations have had to deal with two distinct worlds of software applications: One involves the world of **business process automation software**, software that automates processes in areas like accounting, sales, and production. This software has proven to be very good at automating specific tasks, but it has proven to be rigid and hard to change. On the other side is the world of **personal productivity software**, the tools that we all use daily—Microsoft Word, Microsoft Outlook®, Microsoft Excel®, and the Web.

At Microsoft, we're believers in software and the power of software to help companies work better. In-depth customer research has shown that increasing employee productivity helps drive overall company efficiency. So, how can business management software improve employee productivity? Our idea is to integrate the user experience of Microsoft Office with the user experience of business process applications in a way that is familiar and easy to use for the end user, and built around the way people in the company work or "RoleTailored." Software that's targeted around the specific jobs people do can provide tremendous insight and help drive company-wide productivity. These integrated, flexible business management solutions enable people to **make business decisions with greater confidence**.

Because it works like familiar Microsoft software such as Microsoft Office, Microsoft Dynamics has less of a learning curve, so people can **get up and running quickly** and **focus on what's most important**.

By automating and streamlining financial, customer relationship and supply chain processes, Microsoft Dynamics brings together people, processes and technologies, **increasing the productivity and effectiveness** of the business, and helping drive business success.

Most importantly, we know it's critical that we continue to partner with our customers to clearly understand how they work every day, to unlock the power of insight within an organization. With the assets we bring to the table, our partners' industry focus, and an in-depth connection with our customers, we believe we can help change the way that businesses, and their employees, work.

Building a Clear Customer Understanding

In order to build software that is tailored to the work done by specific people and companies it is necessary to have an in-depth understanding of today's businesses and their employees.

To build this level of understanding Microsoft Corporation as a whole invests significantly in understanding our customers and designing and building great solutions for them.¹ Over the course of a year in the 43 Usability Labs on the Microsoft campuses we conduct 1100 usability and research studies per year involving 10,000 participants. We also conduct more 1700 annual site visits where we visit customers in their own environments and observe their real world work style and behaviors.

Within the Microsoft Dynamics R&D team we have a global user experience group with employees located in Copenhagen, Denmark; Fargo, North Dakota; and Redmond, WA. These teams have been engaged in in-depth user research into the requirements customers have for business management solutions over the past three years -- collectively working toward a holistic understanding of how people organized into departments get work done in the real world so we can build software that supports them more effectively. This work has seen the team complete 280 site visits to companies and partner shops where they conducted 1400+ interviews and/or observations with individual people as they went about their daily work.

During this research we have collected the following types of information:

- People – As part of an observation, individuals are interviewed at depth to collect information on their roles, demographics, psychographics etc. They are then observed as they go about their daily routine to record interactions with fellow employees, software and the company's processes.
- Departments – Companies' organizational charts were collected so that the number of overall departments, the individuals that make them up and the reporting structures could be understood.
- Work – The specific internal processes a company uses within and across departments and also the external processes they use to interface with suppliers, partners and customers.

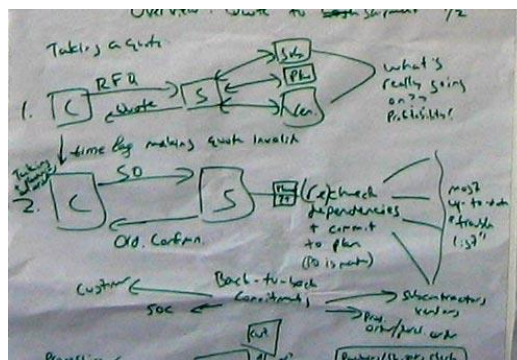


Figure 2: Example of an actual process collected during research.

¹ You can find detailed information on how we approach usability generally at Microsoft in "Appendix 4 – Usability at Microsoft" of this document."

The Microsoft Dynamics Customer Model

The result of this research is something we call the Microsoft Dynamics Customer Model. The Microsoft Dynamics Customer Model describes how people in departments do work within and across organizations. It is the repository for all of the Microsoft Business division's information and research regarding processes and people and is used to ensure that we are focusing on a common set of people and processes when we build Microsoft Dynamics solutions.

Definition of the customer model²

The customer model today consists of the following elements:

- Models of companies for small and midsize businesses³, as well as large and complex departments
- 61 "personas" or "user profiles" which represent a typical view of the people that can occur within an organization defined primarily by the collection of roles they have. (A role is a specific grouping of tasks that a persona is responsible for or participates in.)
- Five midsize business departments (Operations, Finance, Human Resources, Sales & Marketing, IT & Partners)
- 15 typical departmental organization charts showing how the personas are typically organized in these five departments
- 33 process groups that represent the work people do within business scenarios
- 155 processes and subsequent tasks and steps defined across the 33 business process groups



Figure 3: The Microsoft Dynamics Customer Model

² High level details of this can be found in Appendix 2 – The Microsoft Dynamics Customer Model.

³ Small Business is defined companies with fewer than 50 people; Midsize Business as 50 – 1000 people.

Utilizing the Customer Model

There are a number of ways that the customer model is used by our development teams within Microsoft:

- **General understanding of customers:** Development teams need to have an understanding of customer's processes, departments, and most importantly people in order to build business solutions that meet their needs. One of the aims of the customer model is to drive customer-centric design into our products. The goal is to have a, rigorous, analytic, data-driven way to do design that will guide and inform Program Management.
- **Repository for customer knowledge:** The development teams already have a good base of knowledge that reflects our customers that we can apply to our designs. The customer model is the vehicle to channel all our knowledge about the customer. It is the repository for all information regarding a certain process or persona across all teams. When a team does research for their needs for a release cycle, this is captured for reuse by other teams in a standard way. It also contains the methodologies of how to do research so that future research uses the same materials and guidelines of past research.
- **Language to represent users and work:** The customer model is a knowledge base tool. It provides a language to document, capture and share how work gets done. It captures process maps and how they relate to people in crisp way, as well as variations from customers and partners. The aim is to be able to model all possible companies and users that may use our product. Each vertical and instance of our deployments has variations. The customer model provides a language that helps our customers and partner's document and account for the variations on those people and processes.
- **Targeting of features to users:** The customer model provides the mechanism for gathering information regarding which business processes are most common and painful and who they apply to, through a series of quantitative studies. This alleviates debate around which problems are the most important to solve and allows us to focus development on the most painful and important areas.
- **Focus for Program Management collaboration:** The customer model provides a focus for problem solving and collaboration across product teams within our development organization. A set of program managers or developers can come together based on a set of people, processes, and departments and ask: "What are you trying to do, what am I trying to do, how can we collaborate?" thereby driving more consistent and efficient designs.

Reflecting the Model in Software

The customer model is ultimately being used to design user experience that directly supports the specific work a person does.

Based on an individual's role there are three possible primary experiences:

- **Microsoft Dynamics Client** – Some people spend most of their day working within the Microsoft Dynamics client and really have no need or interest in leaving it. They would like information from other systems and applications such as Office to be surfaced directly in their Microsoft Dynamics client.
- **Microsoft Office** – Some people spend all day in Office applications but on occasion need information from backend systems. They would prefer this to be available to them in Office directly so they do not need to learn additional applications.
- **Business Portal** – Some people only interface with backend systems in the context of a specific process. They would like an experience specific to that process that leads and focuses them in an optimal manner. For these people we can combine all the elements they need in a set of simple web based screens.

Microsoft Dynamics Client

The user interface (UI) in Microsoft Dynamics products will be based on the customer model in a number of ways:

- The information architecture of the UI (how information and tasks are organized) will be based on the customer model. The goal is to organize the UI so that it matches each individual's work.
- The information and tasks presented to users in the UI will be based on the customer model.
- Although current products are based on the customer model, we are working toward shipping a configurable customer model within the product with a goal of letting customers maintain their specific customer model which in turn drives the UI

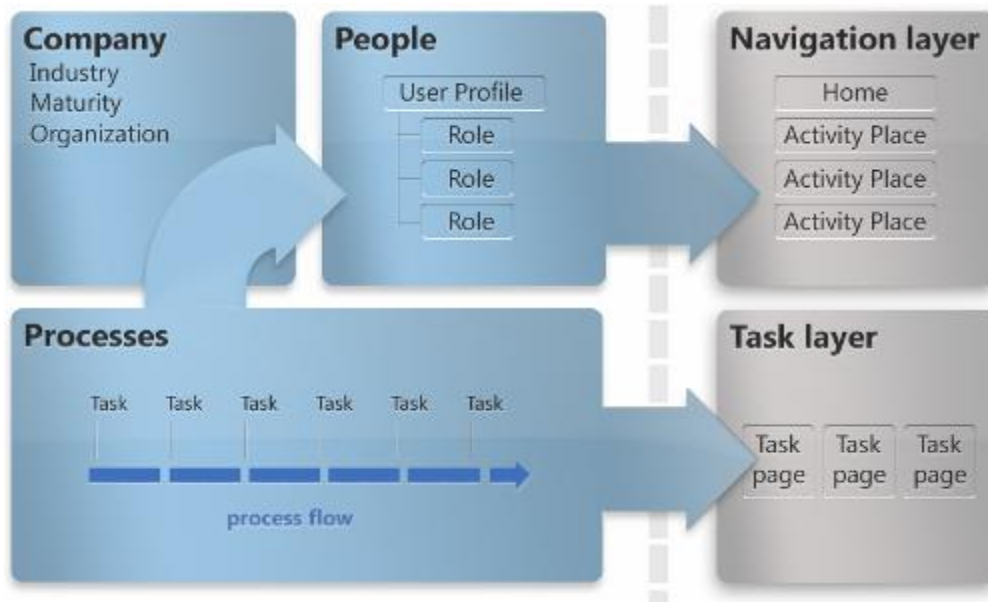


Figure 4: The relationship of the Customer Model to User Interface design.

The industry a company operates in and the complexity of the department in question are key influencing factors in what specific roles an individual holds and therefore the processes they will participate in. It also determines how intricate a process is - which parts of the theoretical maximum process are used and how the process breaks down into activities and tasks. We will ship a default definition of this based on department complexity and partners and customers can customize this and modify it over time for their specific industries.

Here is a more detailed view of how we do this:

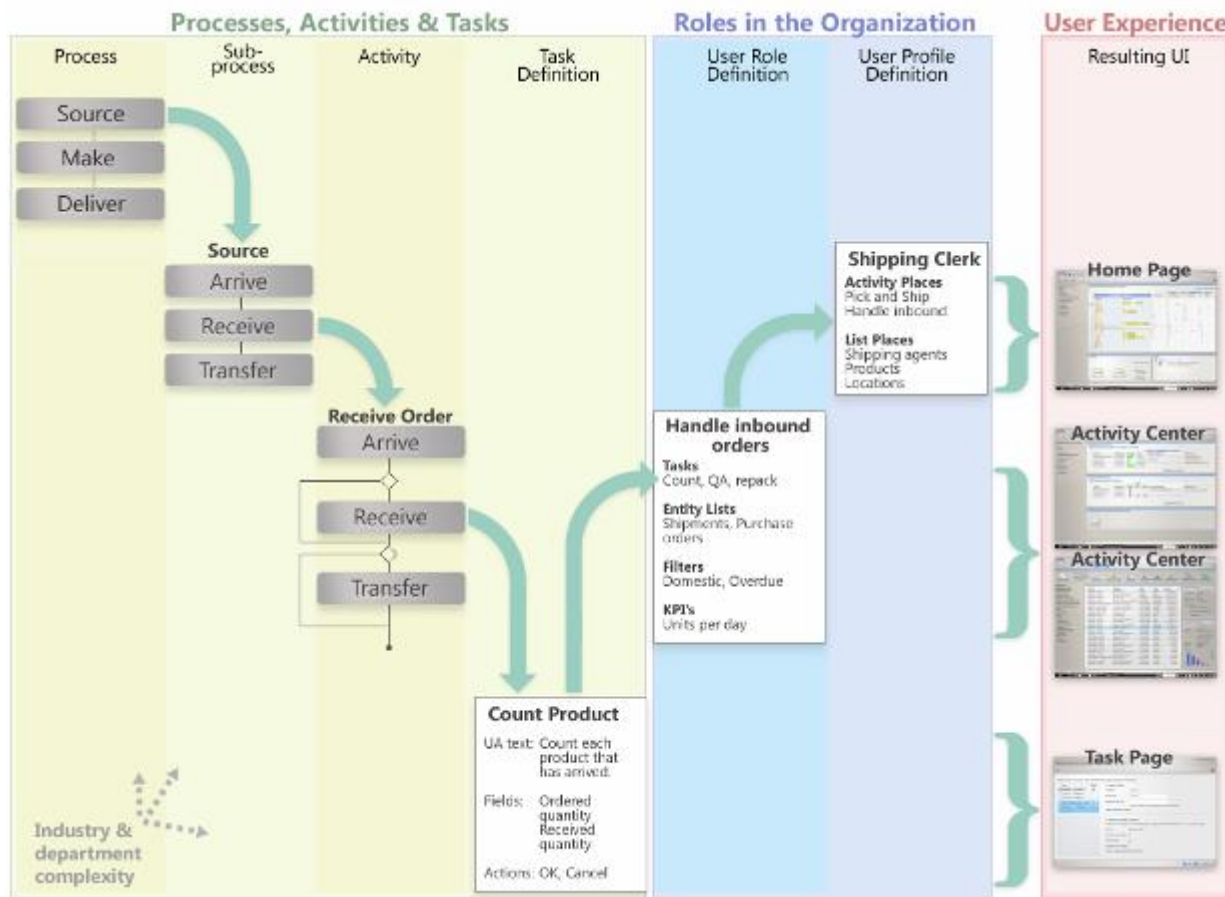


Figure 5: Detailed view of processes and roles surfacing into User interface design

To the far right of this diagram you can see how the navigation structure in the application itself is derived from the model:

At the highest level, the combination of roles a user has translates into a Home page - with links to the processes they participate in. Within the navigation structure on the home page, a user can access a variety of "Activity Centers" with all the tasks the user performs in a specific process. Finally the tasks for each process step are available in a Task Page.

For example if you looked at the work that an accounts payable clerk (April⁴) typically does and apply the methodology above to the customer model definition of April, her full experience will look like this:

⁴ See Appendix 3 for the Microsoft Dynamics Customer Model detailed profile of April the Accounts Payable Clerk

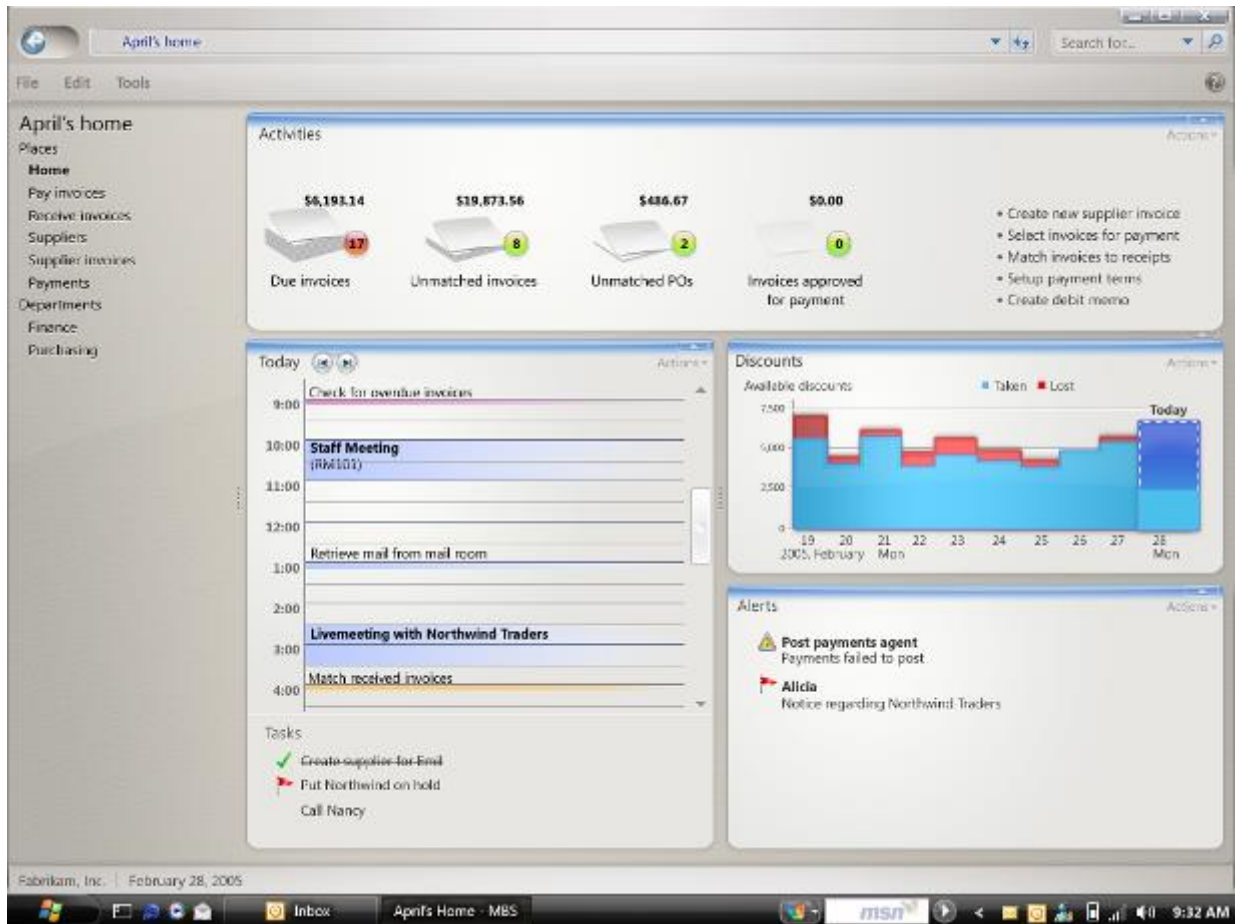


Figure 6: Microsoft Dynamics home screen for April, the accounts payable clerk

In the main pane of the screen we see a number of key user interface elements or “parts” that are used to define the user experience. These parts are consistent across different roles, but the information they expose varies for each person depending on the set of roles they hold and processes they participate in. In this case we see:

- **Activities** – The activities part gives April a visual representation of the key work she does. The stacks of paper in the different categories easily allow her to see how much is outstanding and she can set alerts and notifications if certain thresholds are reached as you see in the case of Due Invoices.
- **Outlook** – As April typically spends all day in the Microsoft Dynamics client, we are surfacing key office information from Outlook here so April can see it without having to switch context.
- **Contextual Business Intelligence** – April has key information she needs to see to be able to make informed decisions in her work. In this case she is interested in balancing the discount she can get by paying different invoices versus keeping sufficient cash on hand. Rather than being required to hunt out a variety of reports she is presented with the information she needs most on her home page.
- **Alerts** – This part shows April the exceptions to the standard processes and workflows she participates in that need her immediate attention.

On the left hand side navigation bar you can see links to one Activity Center for each process April is involved in. These are surfaced based on the processes and tasks her role works on as defined by the customer model in the following manner:

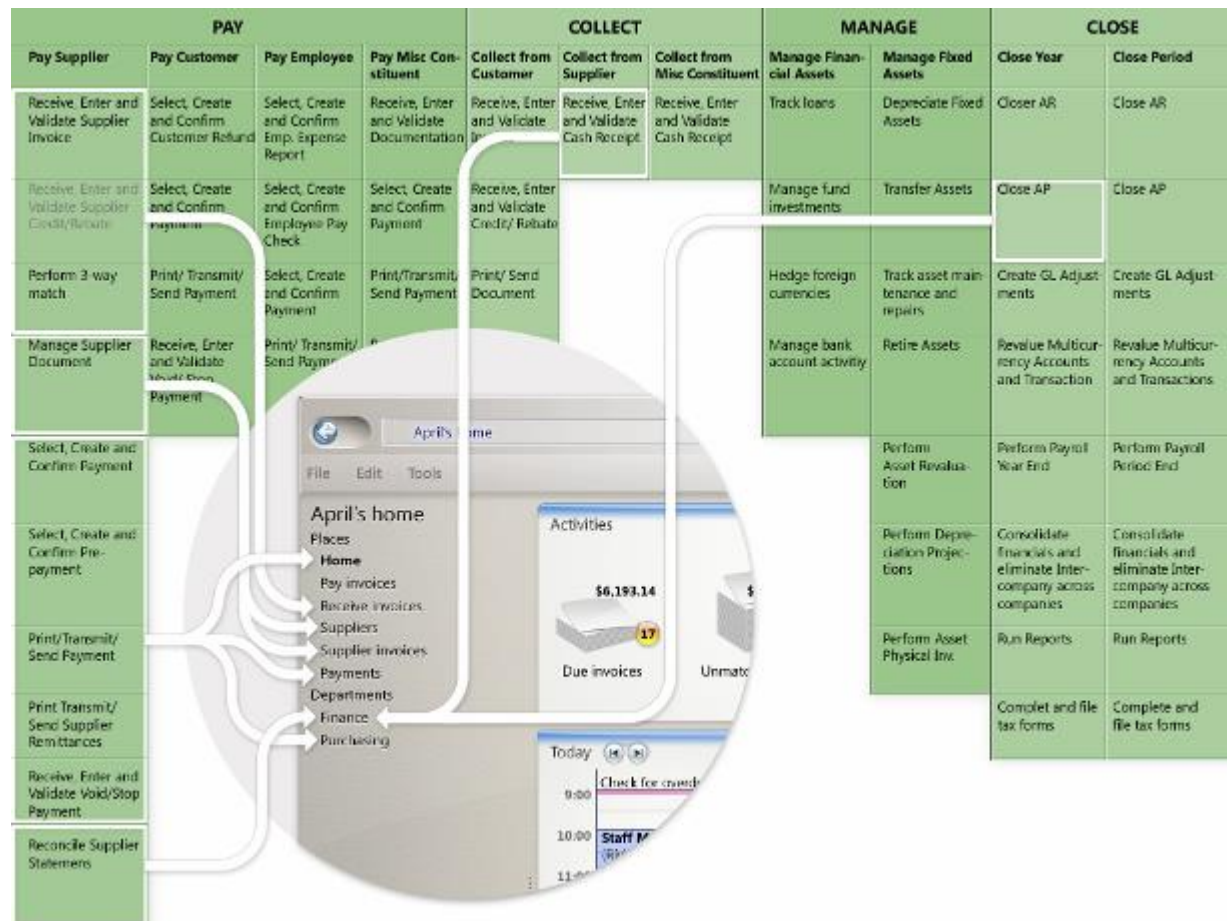


Figure 7: Designing April's Navigation

Here is another example using the persona of someone who works in the warehouse in shipping and receiving: "Sammy the Shipper."

You will see in this case there are a number of consistent parts such as Alerts and Activities but the content is specific to what Sammy works on in the warehouse. Although not shown in this case, the experience for Sammy was also defined as shown above based on the definition of Sammy in the customer model.

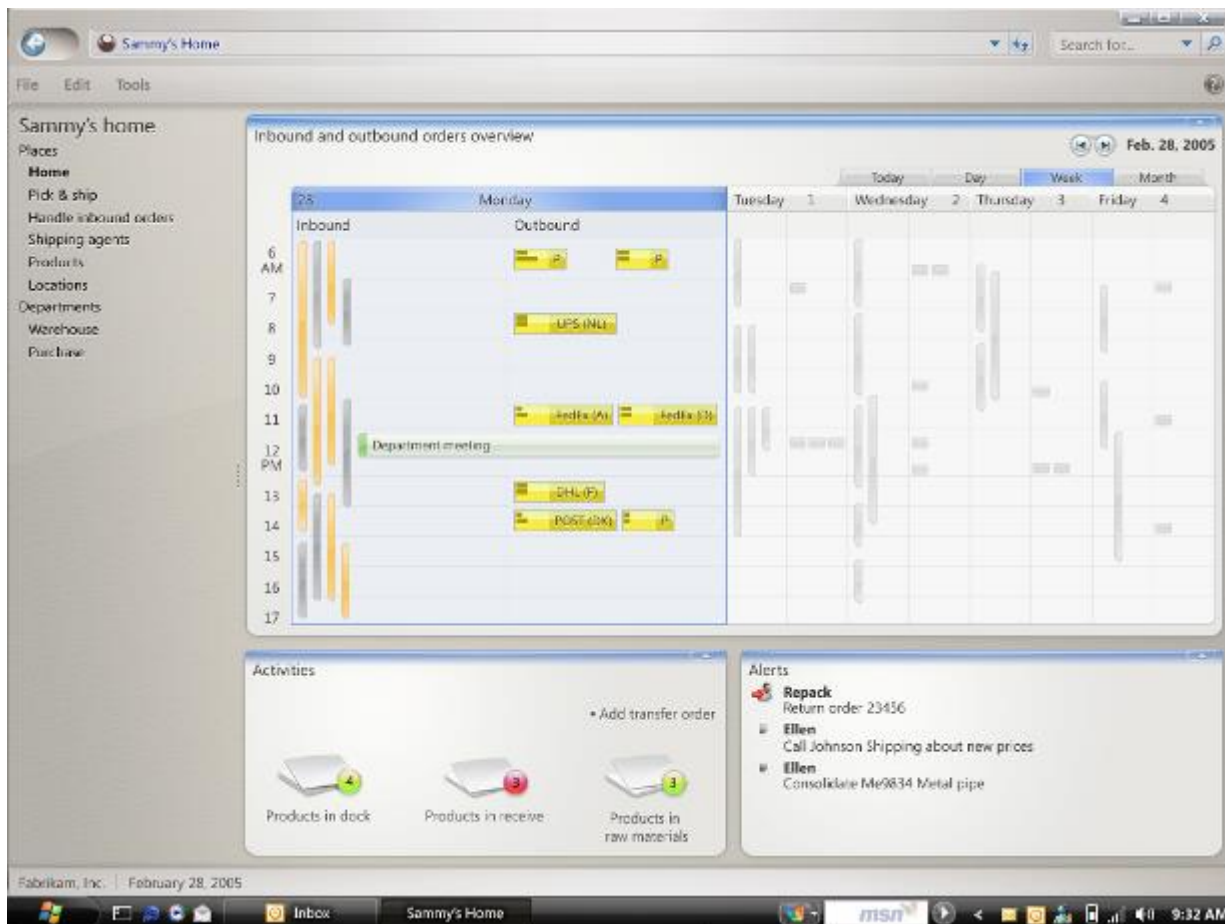


Figure 8: Sammy in shipping and receiving's home screen

Microsoft Office as a primary interface

For users who primarily spend their time in Microsoft Office, we use the customer model to surface the Microsoft Dynamics functionality they need in three primary ways.

- **Integrated User Experience** – For certain classes of business application that require very frequent use of both the application and Microsoft Office, it makes sense to build the entire user experience directly in Microsoft Office (using documented Office APIs) so that it is completely seamless to the end user.
- **Microsoft Dynamics Snap** – For users that need to access business process and business information within specific defined domains, this collection of programs “snap” into Microsoft Office System and help to easily coordinate and manage data in Microsoft Dynamics business management solutions.
- **Functional Integration** – For users that only occasionally need to “reach” into back end systems in an ad hoc manner to grab business information, Microsoft Office provides a rich set of interfaces to allow integration into specific functional areas of the product.

Integrated User Experience

With Microsoft Dynamics CRM, a sales representative such as Michael the Account Manager can manage all sales data, campaigns, and marketing information from within Microsoft Outlook. Contacts and opportunities can be viewed, updated, and shared across the

organization. In addition, current product information, new leads, and contracts related to the sales process can be accessed. This can all be done from within Microsoft Outlook without the need to learn a different system or toggle back and forth. Additionally, for a Microsoft-centric organization, Microsoft Dynamics CRM enables use of existing IT investments, training, and technologies.

In the past, barriers to successful CRM implementations have included the lack of employee adoption, use, and compliance across the organization. A key advantage of Microsoft Dynamics CRM is its native integration to core Microsoft products, which helps organizations mitigate risks of poor user adoption. Users can easily perform tasks because they are familiar and do not require moving between multiple applications. For example, a sales representative can track customer contacts and sales data in Microsoft Outlook as well as view activities, accounts, competition, and more.

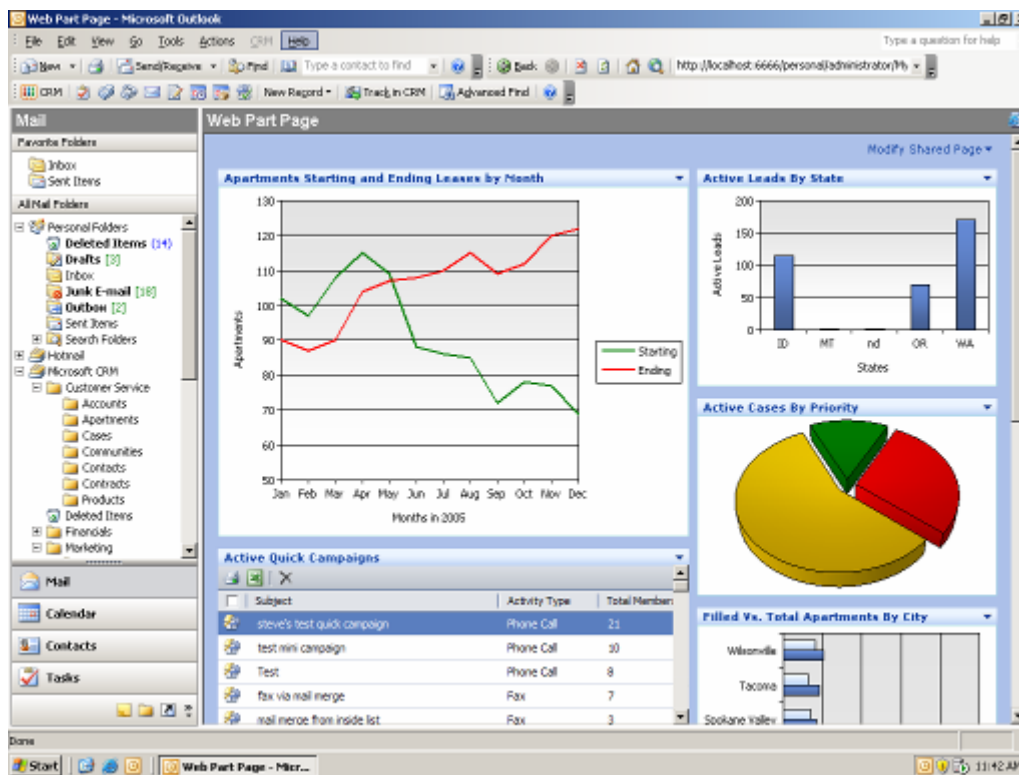


Figure 9: Microsoft Dynamics CRM allows employees to track customer contacts and sales data in Outlook as well as view activities, accounts, competition, and more.

Microsoft Dynamics Snap

Microsoft Dynamics Snap applications enable information workers to interact with Microsoft Dynamics information from within the applications they are most familiar with—Microsoft Office. There are currently 10 snap-ins available that integrate Microsoft Office with Microsoft Dynamics CRM and Microsoft Dynamics™ AX.

These solutions are designed for information workers who predominantly use Microsoft Office but could benefit from access to business information and business processes managed by their back end Microsoft Dynamics business management solutions. Most

people want to be able to do this without opening multiple programs, cutting and pasting data, or having to master the full complexity of all of the software in a company.

As an example, a consultant Tricia working with her customer will coordinate meetings and appointments using Outlook. These calendar events are linked with, in this case, Microsoft Dynamics AX time entries, eliminating the need to correlate tasks and helping reduce errors as a result of users having to transpose data from one program to another. Additionally, it is not necessary for the consultant to engage Microsoft Dynamics AX – all work is completed within Outlook, yet his time allocation is appropriately tracked in the billing application.

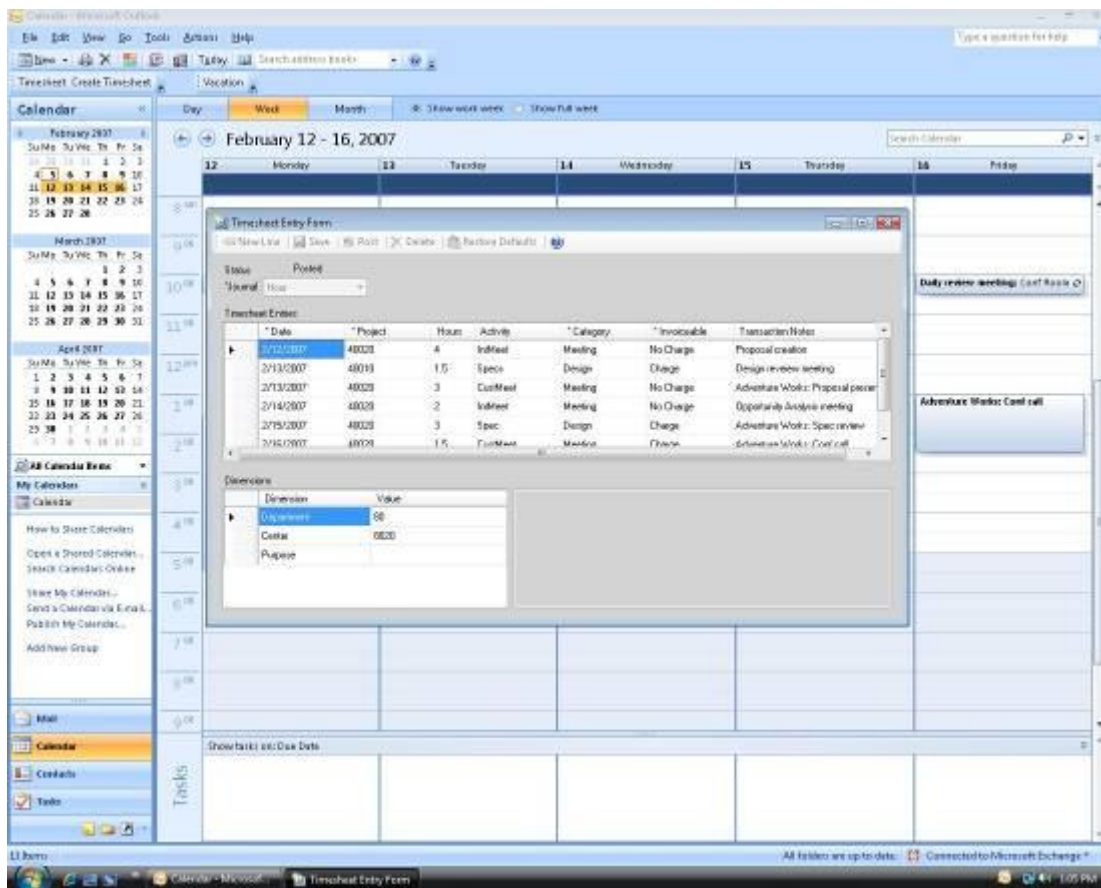


Figure 10: Outlook calendar events are linked with Microsoft Dynamics AX time entries with the Timesheet Management Snap-In.

With the Business Data Lookup Snap-In, people can access Microsoft Dynamics data easily from within Microsoft Office System as well as store Microsoft Office System documents as part of the Microsoft Dynamics database. With a single repository of customer communications, both structured and unstructured data, employees can increase productivity and experience greater operational efficiency.

As an example, Nancy a sales representative's communication is attached to her customer's Microsoft Dynamics AX record. When working with her customers, she can quickly find all related information since it is stored in one place. It's not necessary for her to dig through multiple applications and folders to successfully complete a sale. In addition, while she is on leave from the office, her peers can easily manage her customer relationships, maintaining a high level of customer care.

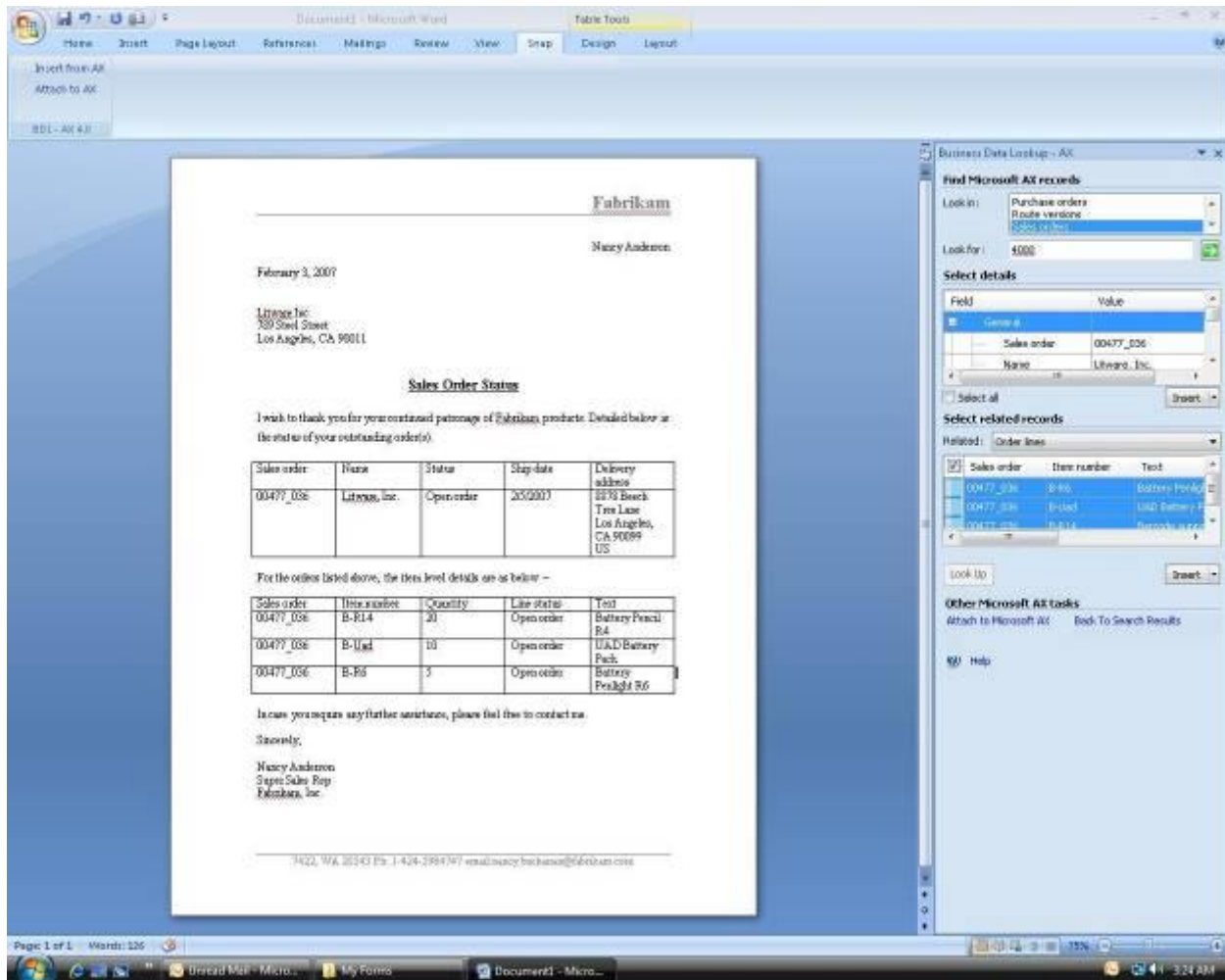


Figure 11: Microsoft Word users can link structured and unstructured data and access Microsoft Dynamics and Microsoft Dynamics AX information.

While utilizing RoleTailored tasks and data sharing with Outlook and Word is not new to Microsoft Dynamics business management solutions (such features as time management and vacation requests previously existed), the method in which Microsoft delivers these applications is. Microsoft partners and independent software vendors (ISVs) can benefit by using the Technical Pre-releases of the Microsoft Dynamics Snap solutions to enhance or customize the shipped solutions to more closely map to specific processes.

Functional Integration

A department manager Vince wants the receptionist Rebecca—who is not a Microsoft Dynamics user—to draft a letter to a customer regarding a previously placed order. While working in Word, when the assistant enters pertinent customer information that's stored in the business solution, she can instantly drill back on that customer data from within the Word document to see the customer's latest order in real time, and she can include a thank you for that order in the letter she is about to send.

Without this integration, the assistant would need to request this customer data from someone with full access to the business solution, impacting multiple people's productivity and efficiency.

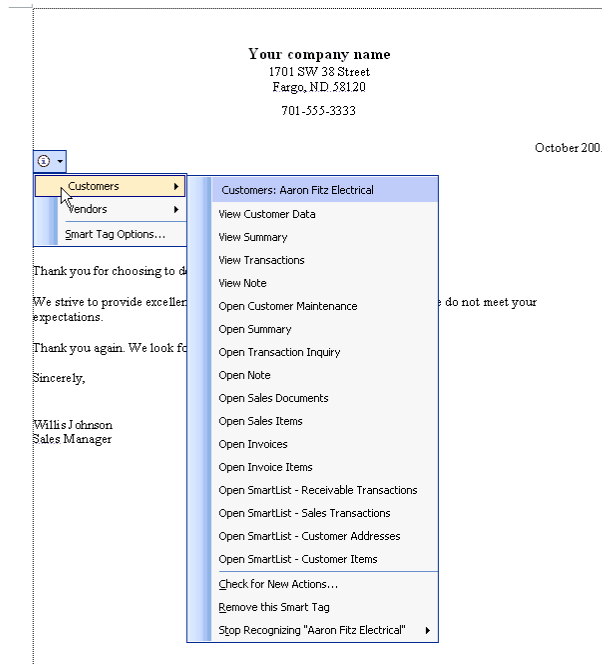


Figure 12: Microsoft Office users can access Microsoft Dynamics data from within Word.

Reporting, budgeting, and forecasting can all be exhaustive and time consuming, yet very necessary steps in a successful business. Using trusted tools that are familiar to most people helps increase productivity and decrease the learning curve. Microsoft Dynamics allows users to review, edit, and manipulate data with the widely used spreadsheet application Excel with as little as one click of the mouse.

Additionally, using Excel to view and analyze data from Microsoft Dynamics and Microsoft Dynamics CRM allows users to quickly provide non-system users information they need. For example, a manager wants a list of the most profitable items emailed to his sales force. Using the export functionality from within Microsoft Dynamics, he can easily export this data to Excel and email the information directly to the sales team. When the sales team receives the data, they can also drill back to the item detail using Smart Tags functionality, which resides in Microsoft Dynamics and is based on the security access the employees given what's appropriate to their role.

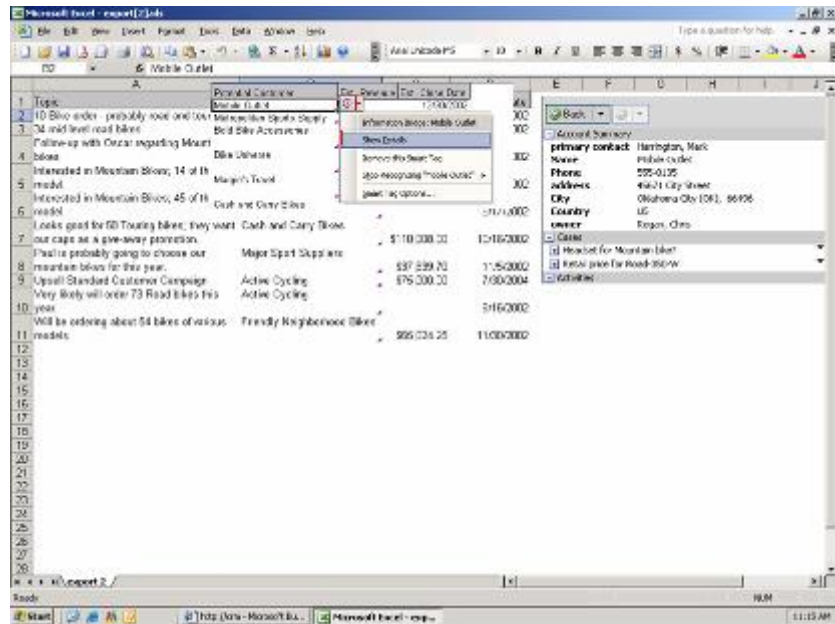


Figure 13: Microsoft Dynamics data can be shared with non-system users from within Excel through Smart Tags functionality.

Business Portal

Many people participate in some business processes only occasionally and for these users we use the customer model to design a portal based user experience that supports their requirements. Consider the following two domain examples

Human Resources - Unless you are in an HR specific role you only touch HR processes occasionally, either when you want to obtain or update personal information or perhaps when you are a part of a larger HR process such as recruiting. With the business portal functionality in Microsoft Dynamics, employees can access their own information in seconds. They can review vacation, pay, and benefit information; enter and approve vacation requests; submit expense reports and timecards; and much more.

A simple example: An employee wants to know how much vacation he or she has available. The HR department has this information, but there's no easy way for the employee to find it, short of searching for their most recent pay stub. If he or she needs the information now, often the only option for the employee is to call or send an e-mail message to HR, who then must switch tasks, find the information, and communicate it back. The employee wastes time looking for and requesting the information. The HR person wastes time locating and relaying the answer. Don't you want to explain how portal functionality addresses this problem like you do for the expense reporting example?

Expense reporting - All transactions start with an individual, but often it will take two, three, or more people to actually record that transaction and make it actionable. An expense report is a good example. The originator gathers up the receipts and fills out a paper form or a spreadsheet template. This form is then mailed internally to the supervisor, who must take time out of each week to sift through the reports, sending them back for clarification or approving them. When the report has been approved, it's forwarded to the accounting department, which may have its own questions to answer before approving, after which the transaction is finally ready to be entered into the accounting system. This

process can take days or weeks, eating up small but valuable bits of time and lowering productivity and job satisfaction for everyone involved.

Business portal functionality within Microsoft Dynamics eliminates confusion by allowing you to set business rules for various types of expenses and by automatically routing the expense report to the approving manager. Once the transaction is approved, the data can be automatically sent into your payables system, eliminating data reentry costs.

Progress and Roadmap

The previous content of this document outlines a vision and approach for building software that empowers people by being tailored to the specific work they do. The solutions that make up the Microsoft Dynamics line are all working toward making this vision a reality over the next few years and the following is a high level view of current and in some cases, planned progress toward that goal:

Microsoft Dynamics GP

- RoleTailored Home Pages for 21 roles
- RoleTailored Business Portal experience

Microsoft Dynamics SL

- RoleTailored Business Portal experience
- RoleTailored Business Intelligence experience (BIO)

Microsoft Dynamics NAV

- 28 different RoleTailored Home Pages

Microsoft Dynamics AX

- RoleTailored experiences

Microsoft Dynamics CRM

- RoleTailored approach for sales, marketing and services

Microsoft Dynamics SNAP

- Currently available Microsoft Dynamics Snap solutions include:
 1. Business Data Search Snap-in
 2. Business Data Lookup for Microsoft Dynamics AX
 3. Business Data Lookup for Microsoft Dynamics CRM
 4. Custom Report Generator for Microsoft Dynamics AX
 5. Custom Report Generator for Microsoft CRM
 6. Timesheet Management
 7. Vacation Management
 8. Expense Management
 9. Customer Journal for Microsoft Dynamics AX
 10. Customer Journal for Microsoft Dynamics CRM

Appendix 1 – Microsoft Usability Research

As aforementioned Microsoft Corporation as a whole invests significantly in understanding our customers and designing and building great solutions for them.⁵ Over the course of every year in the 43 Usability Labs on the Microsoft campuses we conduct 1100 usability and research studies per year involving 10,000 participants.

Lab Studies

Most of our research is conducted in Usability Labs based in Redmond, WA. On average, approximately 900 participants per month evaluate our software. A database of 60,000 people in the Seattle area helps us find the right person to match the profile required for each given study. Once an individual has enrolled to participate in the Usability Research program they are entered into this main database.

From this database, we will look to match the participant with an appropriate study or product evaluation. If we find a match, we will then call to arrange a mutually agreeable time to participate in the study.

On the day of the study, when the participant arrives at Microsoft, they are greeted by the Usability Engineer, and given a brief tour of the lab. The Usability Engineer has the participant sign a non-disclosure agreement, which asks the participant not to discuss the products he or she is about to evaluate. The reason for this is due to the fact much software we test in the labs is proprietary and not ready for public release.

Once the participant is settled into the Participant side of the lab, the Engineer will then explain the technique of thinking aloud. This allows the Engineer to understand the participant's opinions, expectations and thought processes. These perspectives help us to design products for people. Once the study begins, typically the participant is given a series of tasks to complete. While he or she is working on these tasks, the Engineer notes the participant's actions and opinions. Each study is unique based on the study he or she has been asked to participate in.

Once the tasks are completed, the participant fills out an online questionnaire to record his/her opinions and preferences.

Site Studies

As part of our Nationwide Site Visit Program, our product design and development teams go out into the field to observe users in their own work or home settings throughout the United States. By meeting with people in their own unique environments, we are better able to understand the "real life" needs, expectations and circumstances behind today's dynamic software users.

We're interested in meeting with a mix of people who work with all types of products and who have varying levels of computer experience. In fact, there's no need to be using Microsoft products to be eligible to participate. The visits themselves are designed to be as non-disruptive in nature as possible.

They typically last one to two hours in the participant's own office or home. We watch, we listen, and we learn while the participant works. As a thank you for involvement in our

⁵ You can find detailed information on how we approach usability generally at Microsoft in "Appendix 4 – Usability at Microsoft of this document."

program, each person who participates in one of our Usability Site Visits receives his or her choice of a software gift from our Usability Gratuity List.

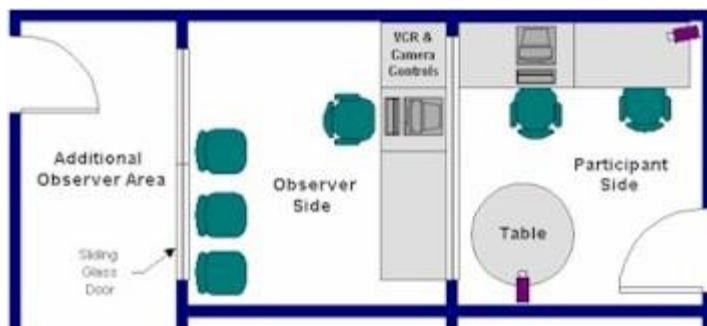
Usability Labs

We have over 25 labs on the Redmond campus. Each lab is separated into two sections: the Observer side and the Participant side. Our Usability Engineers sit on the Observer side, while our participants are on the Participant side. The two sections are separated by a sound-proof wall and a one-way mirror (image below).

For studies using software, a scan converter provides a direct feed from the subject's computer screen to tape recorders and monitors on the observer side. The scan converter allows us to record a much higher quality image than what we would get from pointing a camera at the subject's monitor. We also have the ability to put a free-standing camera in the lab if an additional camera angle is needed for the study.

The engineer can control the camera orientation and zoom from the observer side. This flexibility is especially useful when we are doing a paper prototype or documentation test where the participant typically moves around a lot.

A video mixer allows us to quickly switch among the video sources, and to put multiple sources of video on the screen at once. Normally, the main source is an image of what the participant sees on his or her computer. A reduced image of the participant's face and mouse movements usually appear as a small picture within that main picture. We can move this small picture around on the screen if it gets in the way of an important action on the screen.



The Observer Side

The Observer side is where the Usability Engineer and other observers may view the study. The one-way mirror allows observers to clearly see the participant side during the study, while minimizing any distractions for the participant.

The wall and the one-way mirror are sound proof so observers can discuss design ideas in a normal tone without disturbing the participant. We have several tools in the observer room to collect the usability data and efficiently analyze it. All of our tools have been designed to help us quickly get usability data back to the software team.

The engineer can communicate with the participant via the microphone on the desk, which is activated by a button on the microphone's base. The participant can only hear what is said on the observer side when the engineer activates the microphone. This reduces the

likelihood that participants will be distracted from discussions by the engineers during the test.

The Participant Side

The Participant side of the lab is designed to simulate a normal office environment. We can easily change the layout of the participant's side to fit a variety of study scenarios.

There are two cameras that can be positioned at virtually any angle by the engineer on the Observer side. Cameras are used to record the participant's facial expressions and mouse movements while evaluating software. The participant and the observer can communicate easily using microphones and speakers within the rooms.

Convergence User Experience Lounge

In addition to year round research in the campus labs and customer site visits, the Microsoft Dynamics User Experience team also takes the concept of usability labs on the road by creating an environment called "The User Experience Lounge" at Microsoft Dynamics user conferences known as Convergence. This opportunity represents the largest research event of the year for the Microsoft Dynamics product team and is an ideal place to get access to some of our key personas.

The User Experience Lounge is a place where our product development team can get feedback on our new designs, and we can get a better understanding of our customers and the work that they do.

The methods we use to get this information include the following:

- Usability Studies – The process of determining where the user experience for specific tasks break down and cause task failure. These studies are often done 1:1 where we give a user a set of tasks and watch them complete the prescribed set of tasks with a prototype or real code. We don't give study participants any help or hints, but note where they have trouble and fail at the tasks. The list of these failings is analyzed to determine the causes of the usability problems. These causes are then fixed in design sessions and then retested to validate that they are fixed. Key measures include time on task and error rate. The focus is on finding the usability problems and fixing them. The best usability studies iterate on designs until all usability problems are fixed. The result of the process is a usable design.
- Desirability Studies – These studies are used primarily to assess subjective ratings of user experiences including visual appearance and the emotions that are evoked by the design. In a visual assessment, participants are given visual primers (e.g. picture of a snow-covered mountain) and asked to associate it with a list of terms (e.g. cold; hard; powerful). The participants are then shown a user experience visual design as the visual primer and asked to associate the list of terms that they feel represent the design.
- Focus Groups - Mainly useful for determining how groups of people respond to marketing messages, focus groups are an efficient method of getting first impression qualitative feedback about one or more visual concepts from a group of people at once. In a focus group there usually is one moderator, a room of 6-8 participants, and a screen to show concepts on. The goal is for insightful conversations to build between participants and deeper understanding about a topic. Focus groups can tell you whether customers like what you are showing them, and how *useful* the product would be to them, but not how *usable* it is.
- Surveys – For situations when we have a list of questions that do not require discussion, a survey is an efficient way to get answers from many people in a short

amount of time. Surveys are conducted via phone, web, or email, resulting in good economy of scale. The efficiency allows us to get answers from dozens to thousands of users, even across geographies and markets, quickly and inexpensively. It is important to have someone skilled in wording the questions carefully and analyzing the data in order to obtain valid findings.

Appendix 2 – Customer Model

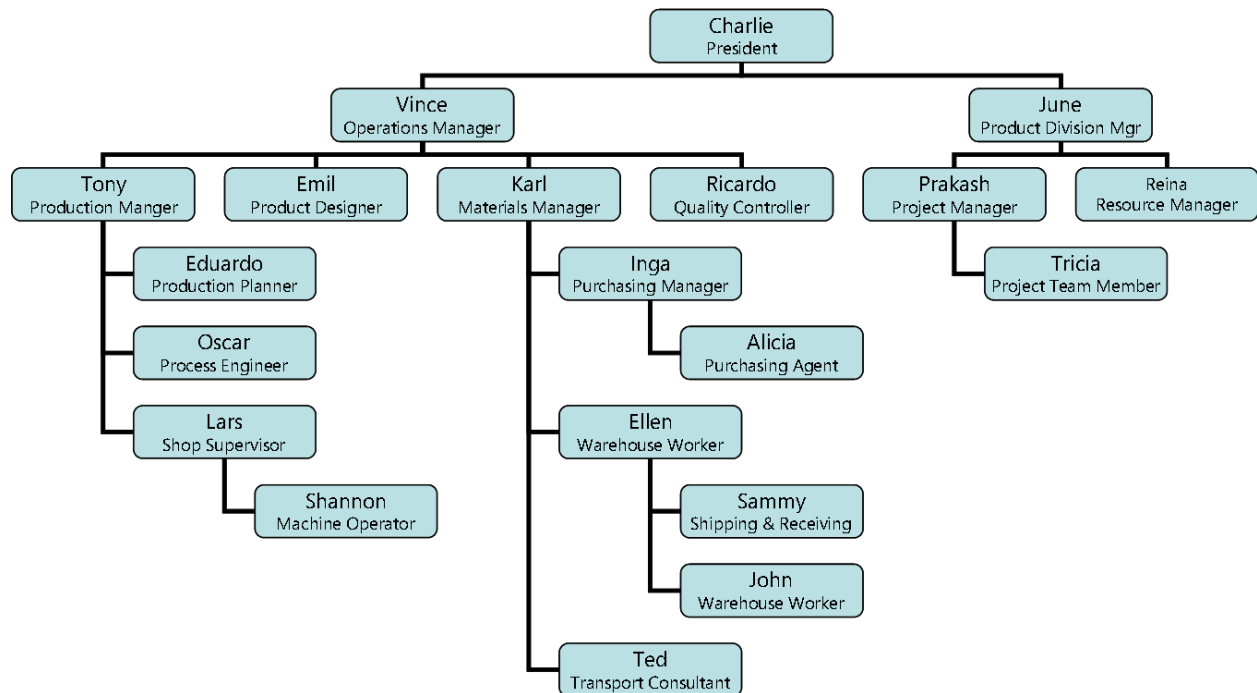


Persona	Description
Charlie • <i>President</i>	Charlie keeps the business viable by determining product and company direction. He is involved with all departments and depends on accurate information from his staff.

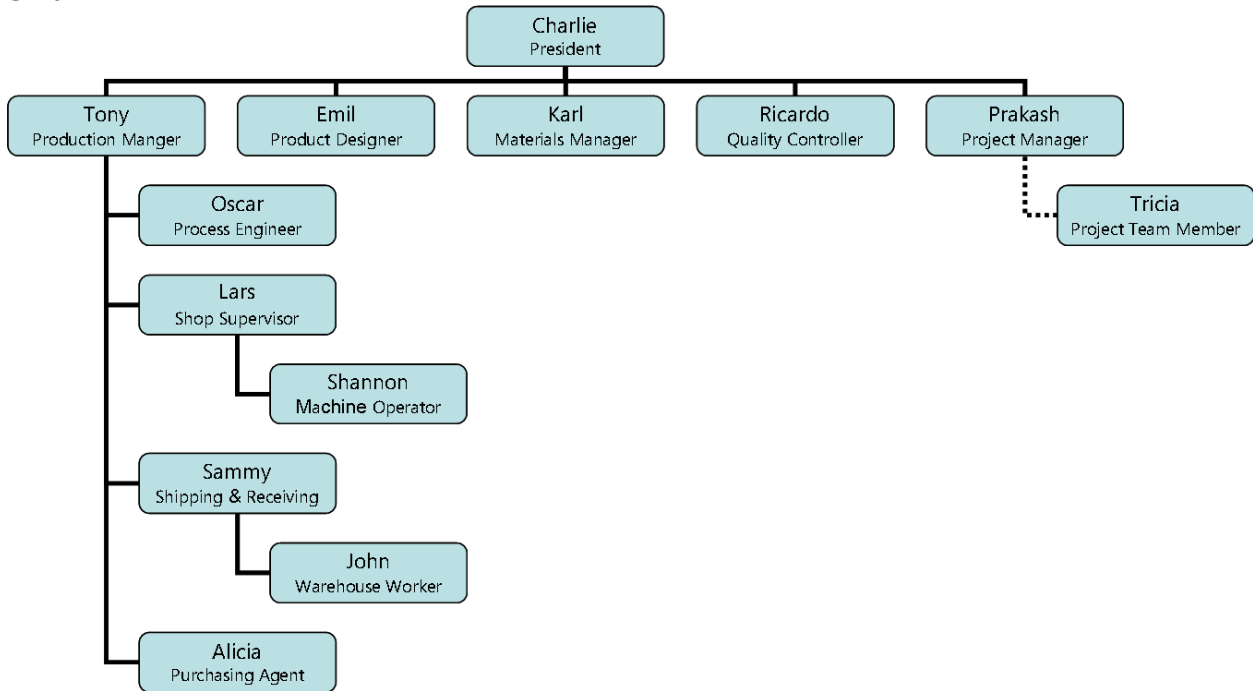
Operations

Operations is the heart of any company, they deliver unique products or services to customers. Operations can include Materials, Production, Purchasing, Warehousing, Process Engineering, R&D, Professional Services, Customer Service, and Quality Assurance. Operations groups in our markets can be distributors, manufacturers, or a combination of the two and they can also be either Large or Small departments.

Large:



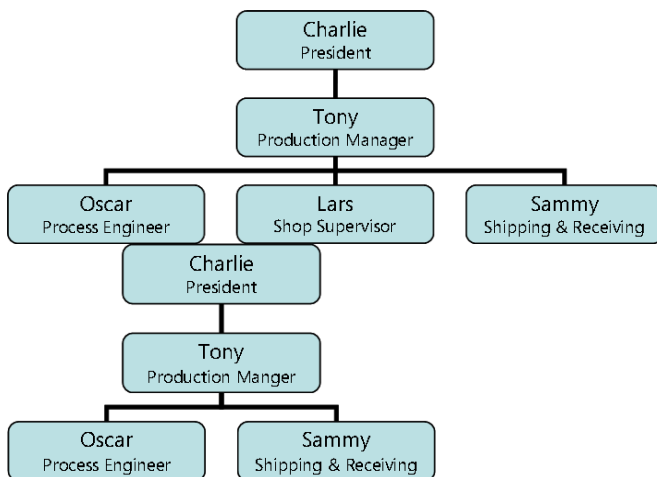
Small:



Customer Service groups are classified by where service is performed. Our research has identified two types: inbound and outbound. Inbound service happens when customers come in. Outbound service happens when a technician is sent to a customer.

Outbound:

Inbound:



	Persona	Description
	Vince • <i>Operations Manager</i>	Vince ensures the timely and cost-effective delivery of products by managing the operations of the logistics, production, service departments.
	Ricardo • <i>Quality Controller • Logistics</i>	Ricardo maintains traceability support documentation and ensures product quality by inspecting received and shipped products.
	Emil • <i>Product Designer • Production</i>	Emil both designs new and modifies existing products. Emil is technical, but also spends considerable time searching for the least expensive components.
	Karl • <i>Materials Manager • Logistics</i>	Karl ensures that materials come in and products reach their destination on time. He ensures that replenishment and shipping processes are optimized for reliability, speed and cost.
	Ellen • <i>Warehouse Manager • Logistics</i>	Ellen ensures that inventory levels are accurate and that periodic physical inventory counts occur. She optimizes the warehouse and focuses on turnover rate reduction.
	John • <i>Warehouse worker • Logistics</i>	John puts received items away and picks items that need shipping. John waits for Sammy or Ellen to tell him what to do.
	Sammy • <i>Shipping and receiving • Logistics</i>	Sammy manages shipping and also receives goods and verifies them against purchase orders. He also supervises the other warehouse employees.

Persona	Description
 <p>Inga • <i>Purchasing manager</i> • <i>Logistics</i></p>	<p>Inga sources the right quality product from the right supplier at the right price. She understands supplier performance, and the supply chain-related departments. Inga delegates day-to-day purchasing activities to Alicia.</p>
 <p>Alicia • <i>Purchasing agent</i> • <i>Logistics</i></p>	<p>Alicia orders materials and supplies. She follows up on PO confirmations and partial receipts. She also researches suppliers to get the best quality products at the lowest price. Alicia reports to Inga.</p>
 <p>Ted • <i>Transportation coordinator</i> • <i>Logistics</i></p>	<p>Ted tracks shipments and advises on customs regulations and shipping documentation. Ted is knowledgeable about shipping, the freight forwarding industry, and international trade issues. He has key relationships across these areas.</p>
 <p>Tony • <i>Production manager</i> • <i>Production</i></p>	<p>Tony works with product development, process engineering, and sales to make production decisions. He ensures the necessary resources are in place and that the production plan is being carried out properly.</p>
 <p>Oscar • <i>Process engineer</i> • <i>Production</i></p>	<p>Oscar often receives specifications for new products from Emil. He defines the necessary processes to make the product; Occasionally he and Emil make prototypes together.</p>
 <p>Eduardo • <i>Production planner</i> • <i>Production</i></p>	<p>Eduardo manages scheduling and planning of production. He often needs to reshuffle existing orders to make room for more urgent orders. He considers exceptions to be the rule.</p>
 <p>Lars • <i>Shop supervisor</i> • <i>Production</i></p>	<p>Lars ensures that the machine operators are productive, trained, and motivated. He can perform any job in the shop, but rarely has to do so.</p>
 <p>Shannon • <i>Machine operator</i> • <i>Production</i></p>	<p>Shannon is trained to work her machine. She works hard to meet her production quotas so she can get her bonus. Shannon does not use a computer at all.</p>



Persona	Description
June • <i>Product division manager</i> • <i>Professional services</i>	June drives project management processes and optimizes the performance of project teams through “best practices.” She is ultimately responsible for revenue goals, project completion, and customer satisfaction for all service engagements delivered.
Reina • <i>Resource manager</i> • <i>Professional services</i>	Reina manages and schedules Project Team Members. She ensures they are hired, trained and available to Prakash and June for projects.
Prakash • <i>Project manager</i> • <i>Professional services</i>	Prakash is responsible for project delivery. He works with Reina to provide adequate resources and staff. He has approval authority for all project-related charges from Tricia as well as any other materials charges.
Tricia • <i>Project team member</i> • <i>Professional services</i>	Tricia works with other Project Team Members as directed by Prakash to ensure timely project completion for customers. She reports the status and submits expense to Prakash.
Marie • <i>Customer service manager</i> • <i>Customer Service</i>	Marie manages the customer service team. She and her team make sure customers remain customers when things go wrong.
Daniel • <i>Dispatcher</i> • <i>Customer Service</i>	Daniel organizes the fleet of service technicians. He decides which customers they will call on and in what order.
Terrence • <i>Outbound technician</i> • <i>Customer Service</i>	Terrence works in the field performing maintenance and installations as directed by Daniel.
Lisa • <i>Customer service rep</i> • <i>Customer Service</i>	Lisa receives phone calls from customers with questions. If she cannot answer their questions she routes them to a person who can.

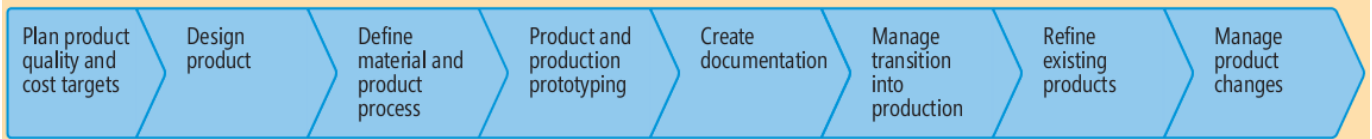




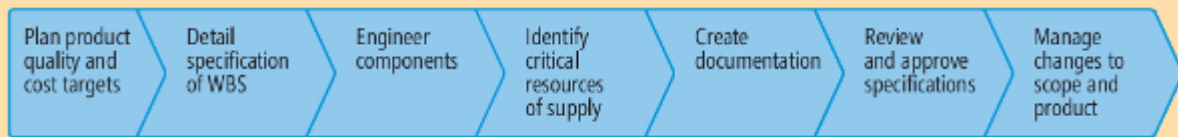
Persona	Description
Rebecca • <i>Receptionist</i> • <i>Customer Service</i>	Rebecca can have many roles. She answers phones, makes appointments, does data entry, and handles other admin tasks.

Processes – The typical top level process groups that are carried out by the Operations department are as follows:

PRODUCT DESIGN



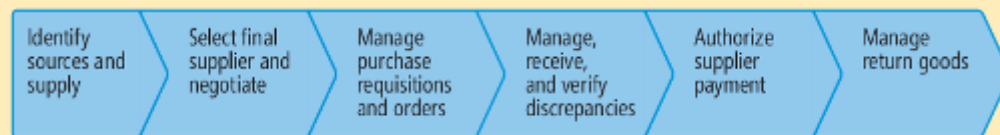
PROJECT ENGINEERING



OPERATION PLANNING



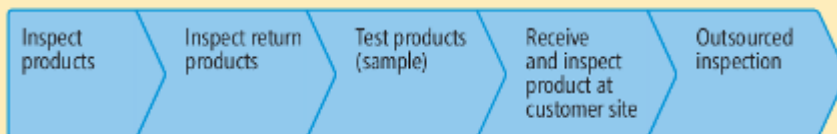
PURCHASING



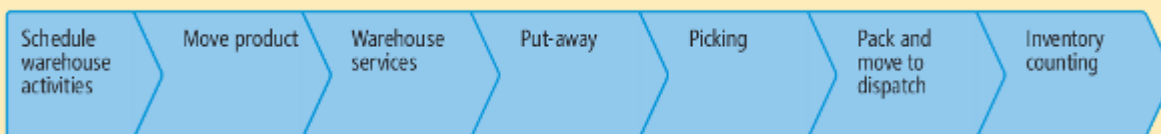
RECEIVING

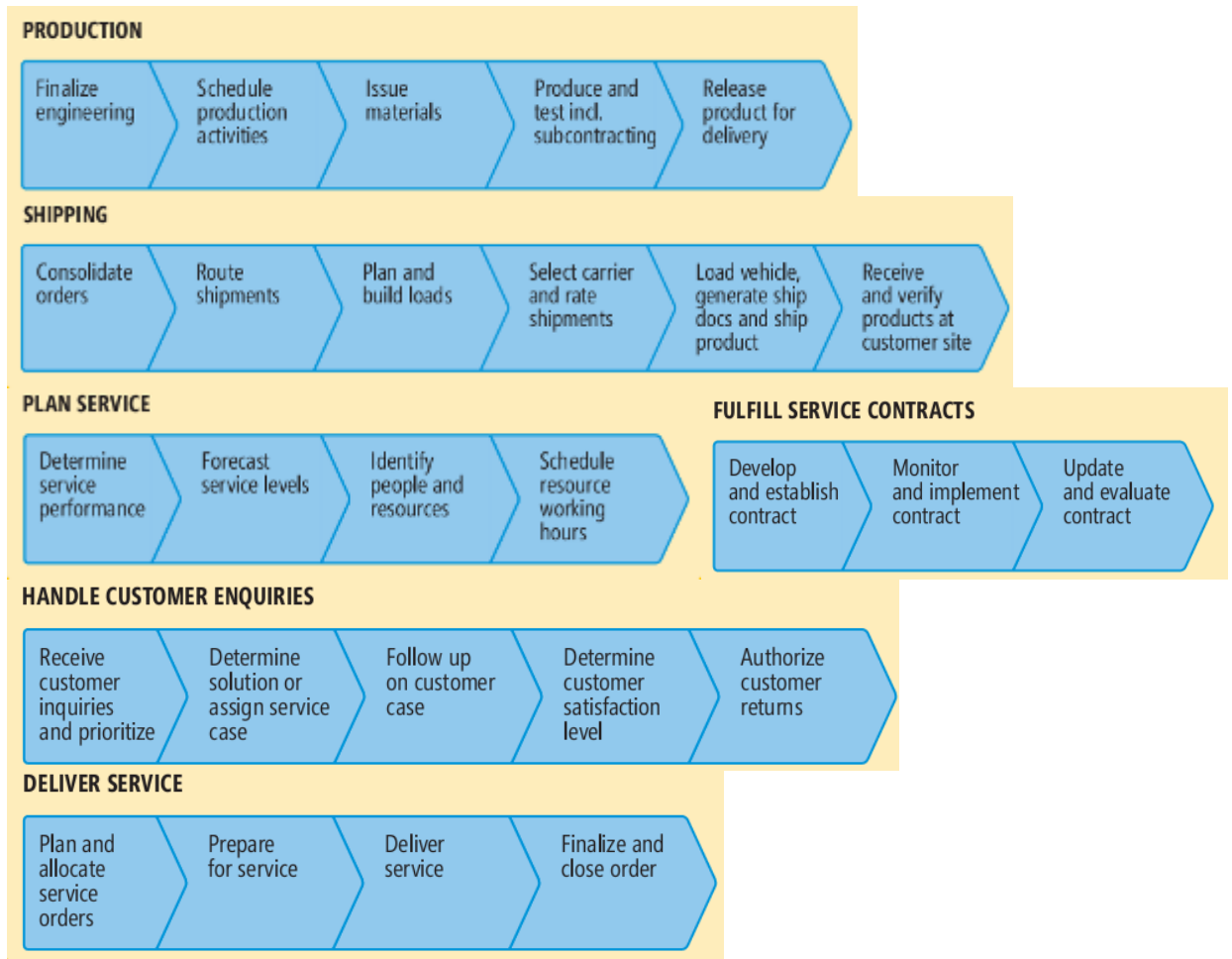


QUALITY ASSURANCE



WAREHOUSE OPERATIONS

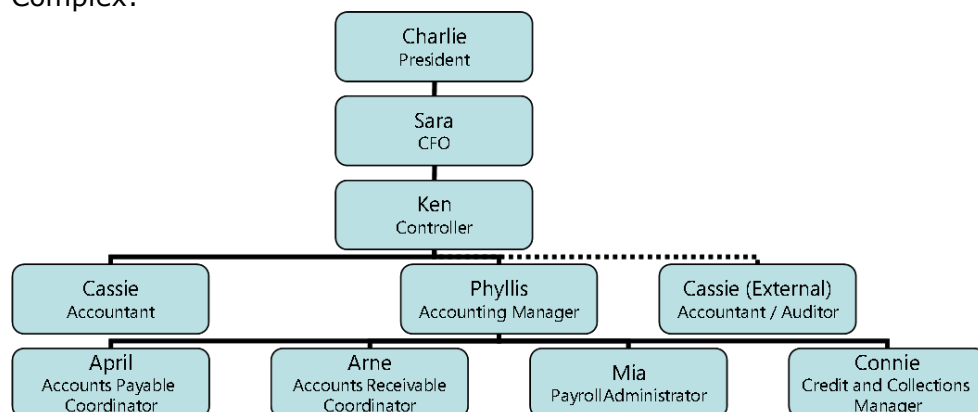




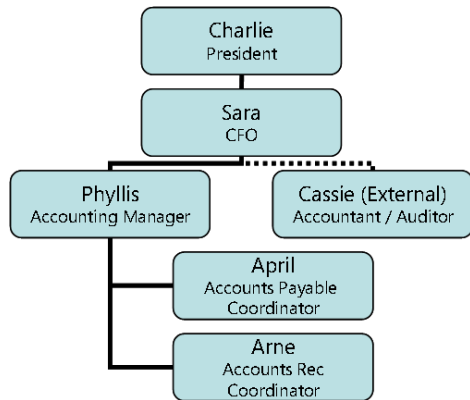
Finance

We have defined three types of finance departments: Simple, Moderate, and Complex. The complexity of the financial components that the department handles (e.g. industry, number of companies, currencies, and tax authorities) helps to determine the type and is reflected in the number of employees.

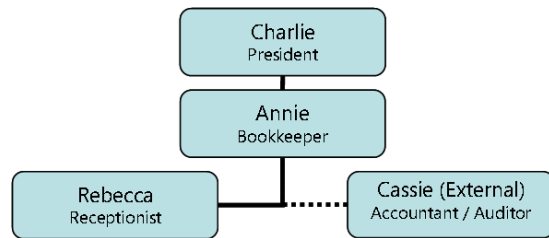
Complex:



Moderate:







Simple:

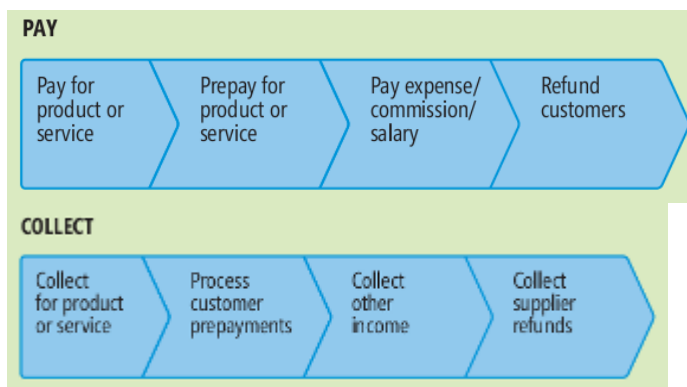


	Persona	Description
	Sara • <i>CFO</i>	Sara develops the financial plan and goals for the company, and then constantly monitors performance against them. Others rely on her to assess the financial viability of opportunities. Sara relies on Ken, Phyllis, Vince and Kevin to provide her with the information she needs for business insight.
	Phyllis • <i>Accounting Manager</i>	Phyllis manages the accounting department, processes GL transactions, reviews and approves AR, AP, payroll, bank transactions, and reviews aging reports. She also ensures that her team accurately completes financial procedures on time.
	Ken • <i>Controller</i>	Ken tracks the department's financial goals. He continually improves processes to achieve financial goals. He proposes and helps implement changes to optimize performance. He may approve documents and payments.
	April • <i>Accounts payable Coordinator</i>	April verifies paperwork matches and applies criteria from Ken or Phyllis to determine which invoices to pay and then processes supplier payments. She may also reconcile bank statements. Because April sees data from so much of the company, people come to her with all types of questions.



Persona	Description
Arnie • <i>Accounts receivable administrator</i>	Arnie verifies shipment paperwork and creates invoices. He processes and applies cash receipts to appropriate invoices. He may follow up on past due accounts to obtain payment.
 Annie • <i>Bookkeeper</i>	Annie handles the day-to-day financials of a small business. She is involved with creating invoices, paying bills, and balancing the bank statements. Annie hands off, to the external accountant, the more complex tasks of payroll, depreciation, and creating financial statements.
 Connie • <i>Credit and collections manager</i>	Connie knows which customers are creditworthy and can have extended payment periods. She corresponds with such customers by e-mail, telephone, and collection letters.
 Mia • <i>Payroll administrator</i>	Mia collects information from employees to process the payroll and post it to the GL. She also takes care of tax calculations and reporting.
 Cassie • <i>Accountant</i>	In an external role, Cassie either does the books (for a small business), or audits the books (for any size company). In an internal role as an employee, Cassie takes care of accounting duties within a complex financial department.

Processes – The typical top level process groups that are carried out by the Finance department are as follows:



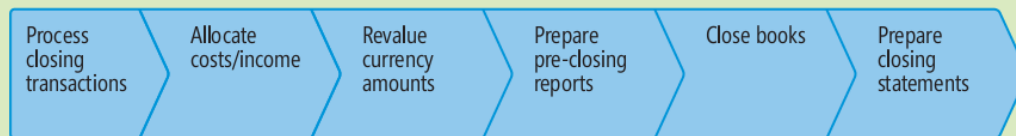
TREASURY MANAGEMENT



CAPITAL ASSETS



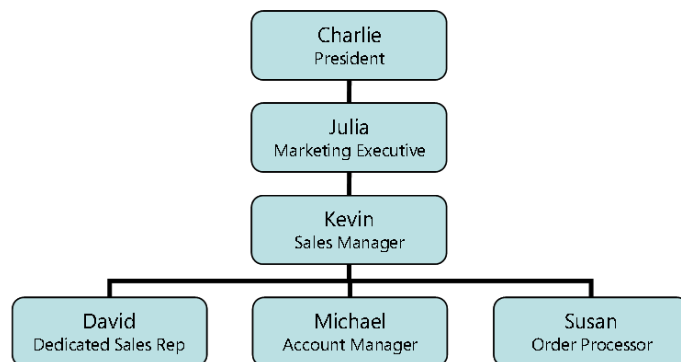
CLOSE



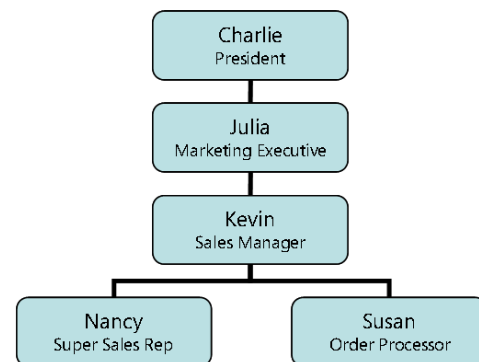
Sales and Marketing

Sales department are grouped by sales process: Companies with simpler sales models have salespeople who perform both account management and lead gathering. For sales that are project-based or take a very long time to close, these functions are split between two specialists. Departments grow horizontally by adding the same type of salespeople.

Complex:



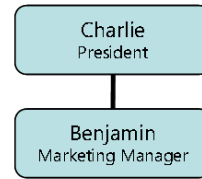
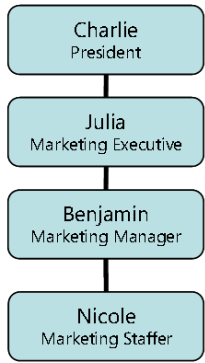
Simple:



Marketing segmentation is based on the size of the department. Benjamin is the first hired. Additional staff flesh out the org chart as the department grows

Large:

Small:



Persona	Description
Kevin • <i>Sales manager</i> • <i>Sales</i>	Kevin manages sales reps for his area and tracks what they are doing. He helps them to close sales and may do limited selling himself.
Nancy • <i>Super sales rep</i> • <i>Sales</i>	Nancy handles all customer interactions, including finding leads, fulfilling orders, up selling, and dealing with service issues. In the simpler sales situation, Nancy does the job of David and Michael combined.
David • <i>Dedicated sales rep</i> • <i>Sales</i>	David finds new customers in complex sales situations. Once the deal is closed, he hands the customer over to Michael, who ensures that the order is fulfilled and handles all future issues, including up selling.
Michael • <i>Account manager</i> • <i>Sales</i>	Michael deals with current customers. He closes sales brought in by David. He ensures orders are fulfilled to the customer's satisfaction (date, quantity, quality) and engages in up selling activities.
Susan • <i>Order Processor</i> • <i>Sales</i>	Susan enters orders and performs sales support tasks. She takes orders from sales reps and repeat orders directly from customers. She works closely with the sales reps as she may talk to the customer more often than they do.
Julia • <i>Marketing Executive</i> • <i>Marketing</i>	Julia manages sales and marketing strategy. She monitors marketing effectiveness and industry success. She builds, presents and argues the business case for the Sales and Marketing budget.



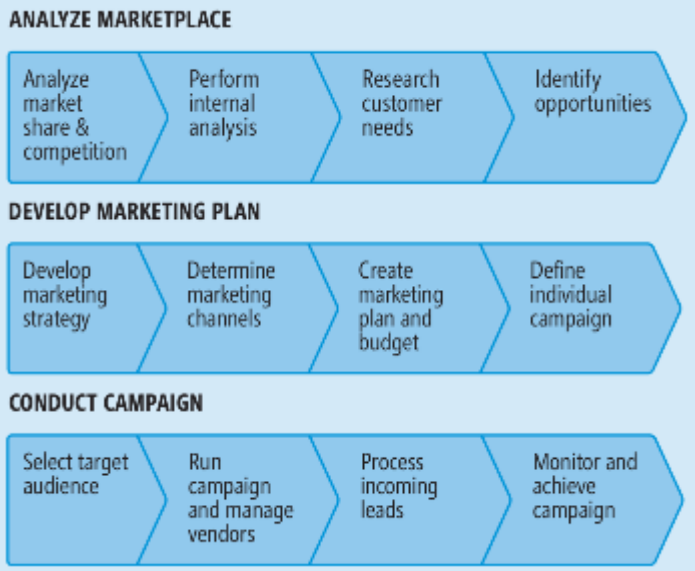


Persona	Description
Benjamin • <i>Marketing manager</i> • <i>Marketing</i>	Benjamin is one of several marketing managers who handle marketing for a group of product families the company sells.
Nicole • <i>Marketing staffer</i> • <i>Marketing</i>	Nicole produces, distributes and places marketing materials.

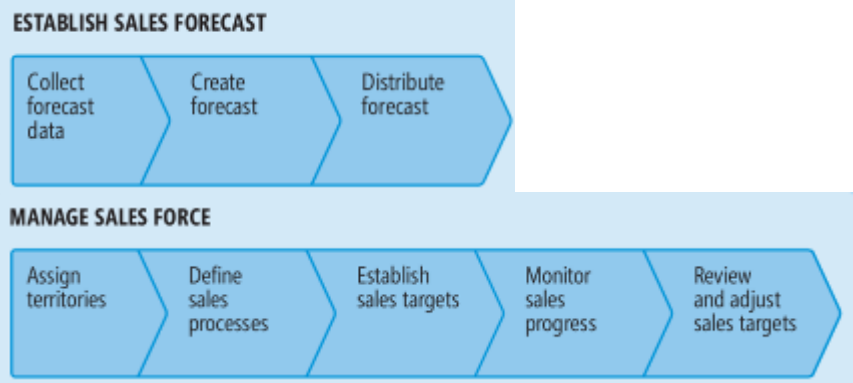


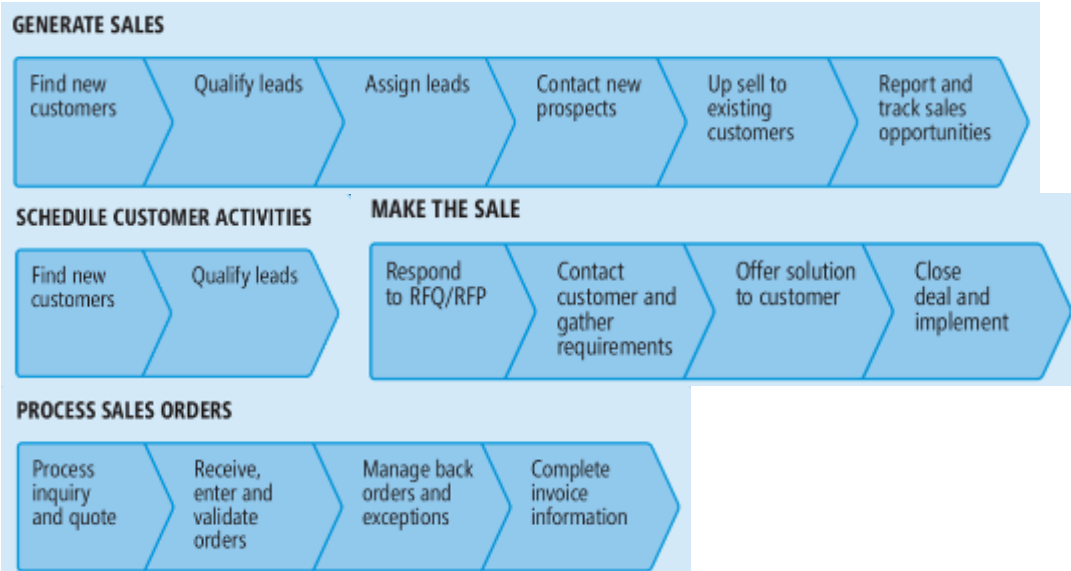
Processes – The typical top level process groups that are carried out by the Sales and Marketing department are as follows:

Marketing



Sales

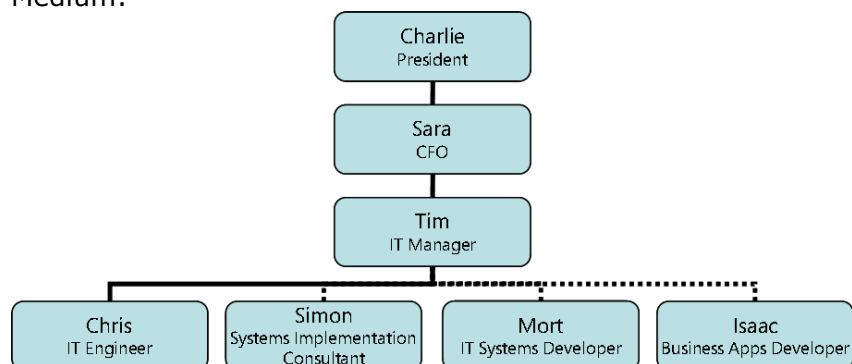




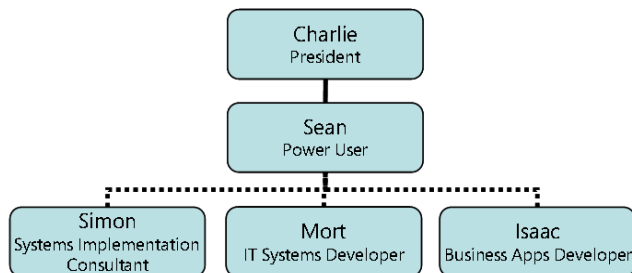
IT & Partners

IT taxonomy is independent of number of employees and segments strictly by the number of servers. Here we see Small IT (1–3 servers) and Medium IT (4–15 servers) shops. People working at VARs, ISVs, and Microsoft have vendor relationships with the IT department.

Medium:



Small:



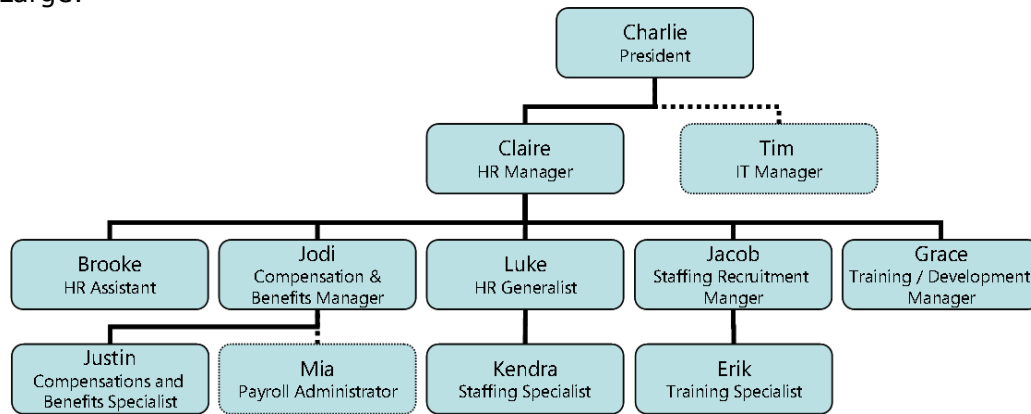
Persona	Description
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	Persona	Description
	Tim • <i>IT manager</i> • <i>IT</i>	Tim is the IT decision maker and owns the IT budget in a company with 4–15 servers. As the senior IT admin Tim manages Chris and completes some tasks to help balance his workload.
	Chris • <i>IT engineer</i> • <i>IT</i>	Chris is the junior IT admin reporting to Tim. He provides day-to-day management and troubleshooting of the network, servers, OS, applications, and end-user support.
	Sean • <i>Technical end user</i> • <i>IT</i>	Sean has a full-time job already, but companies with 1-3 servers rely upon him to provide IT support because he knows about computers. For difficult issues he relies on a VAR.
	Simon • <i>System implementer / Consultant</i> • <i>Partner</i>	Simon analyzes customers' needs, writes the specification and puts together a customized solution. He will do whatever it takes to get the customer's solutions up and running.
	Mort • <i>Customization developer</i> • <i>Partner</i>	Mort does not have a computer science degree, but learned to program on his own. Rather than writing code from scratch he reuses existing code. He wants to be able to fix bugs and implement features and customizations quickly so that he will be regarded as indispensable.
	Isaac • <i>Business applications developer</i> • <i>Partner</i>	Isaac is an ISV developer who writes code for add-in modules that are resold at volume, often through partners. He does not do per-customer customizations or charge by the hour. Isaac has different domain-specific needs from other ISV developers.

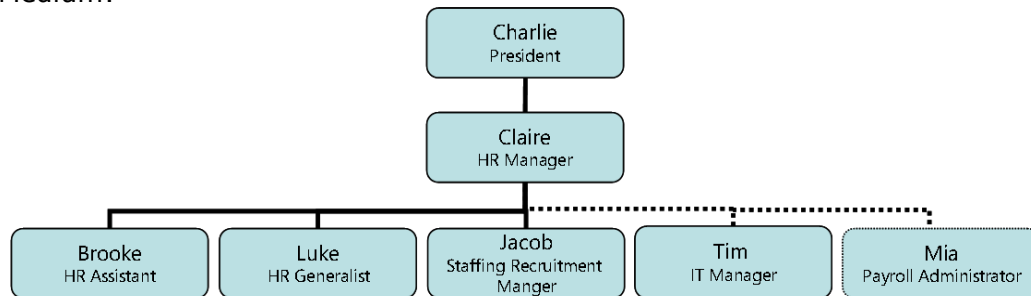
Human Resources

The HR Department ensures that human talent is developed to accomplish organizational goals. The individuals on the HR team focus on attracting, investing in and retaining the best talent. It is broken into Small, Medium and Large segments. The complexity and size directly relates to the ratio of HR staff per workers needed. This model assumes a ratio of 1:100; meaning 1 HR FTE per 100 People FTEs in the organization.

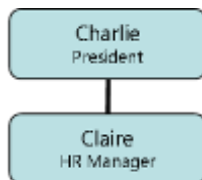
Large:



Medium:







Small:

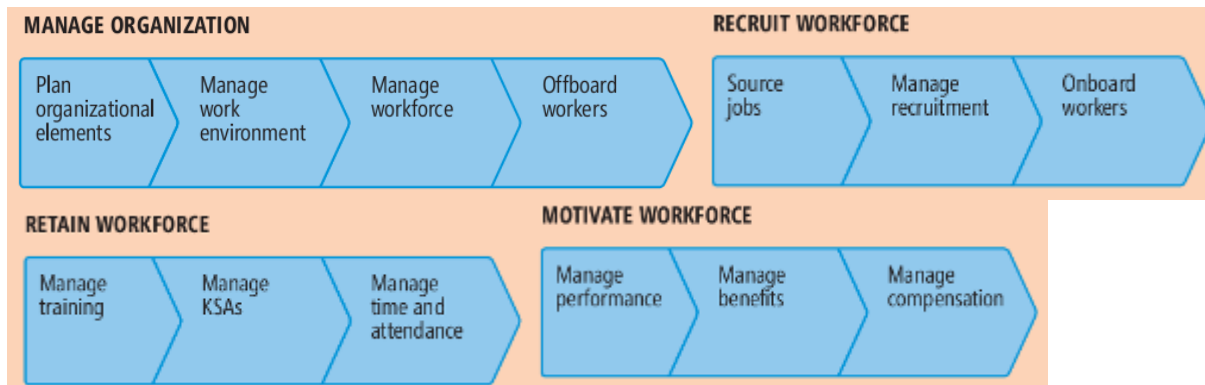


Persona	Description
Claire • <i>HR Director / manager</i>	Claire is responsible for strategic HR planning and budget. She establishes workplace compliance policies and assesses workforce trends. Claire works with individuals company wide and oversees sensitive investigations. In many organizations, Claire manages the entire day-to-day HR function
Brooke • <i>HR assistant</i>	Brooke provides administrative support to the HR office with recruitment and maintenance of worker information. Brooke also coordinates special events.



	Persona	Description
	Jodi • <i>Compensation and benefits manager</i>	Jodi conducts compensation and benefit analysis. She maintains fairness in pay structures and ensures job analysis is tied to compensation planning. She handles preferred HR vendor's relationships.
	Grace • <i>Training / development manager</i>	Grace develops and maintains training plans to achieve workforce skill and knowledge goals. Grace facilitates career and succession planning.
	Jacob • <i>Staffing recruitment manager</i>	Jacob manages recruiting and prepares key staffing metrics. He works with vendors to handle recruiting tasks. Jacob knows what is happening at each stage of the recruitment process.
	Luke • <i>HR generalist</i>	Luke performs daily HR activities and oversees HR and compliance policy. He supports the management team on training and development, performance management, and employee relations.

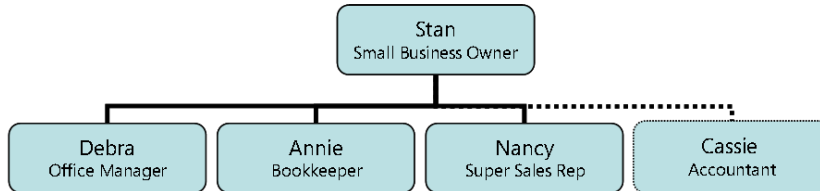
Processes – The typical top level process groups that are carried out by the HR department are as follows:



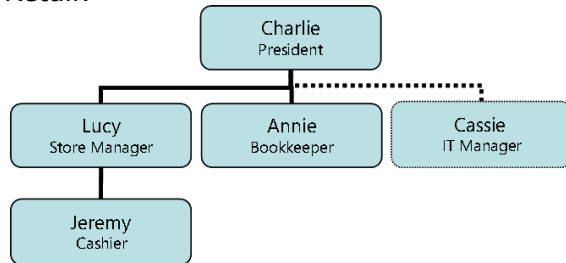
Small Business


We commonly see two distinct types of small businesses: service and retail based. Stan is the small business owner in both cases, but personas in each case are unique.

Service:




Retail:



Persona	Description
 Stan • <i>Small Business Owner</i>	Stan manages the business from start to finish. He is responsible for everything and has to understand every aspect of the business.
 Debra • <i>Office Manager</i>	Debra keeps the company running by taking care of the bills and payments so they have enough cash to operate. She is also the communication hub of the small business.
 Lucy • <i>Store Manager</i>	Lucy interacts with everybody in the business and is the primary contact for all suppliers and shippers. She and her team are accountable to Stan.
 Jeremy • <i>Cashier</i>	Jeremy advises customers, rings up the sales, performs inventory counts, and gives Lucy insight into customers

Appendix 3 – Example of the Persona Detailed View

Each of the personas in the Microsoft Dynamics Customer Model has a substantial amount of information behind it in the form of a definition document. Each of these has a similar form and two examples (Vince the Operations manager and April the Accounts payable Clerk) are shown here:

Vince – Operations Manager	
<i>"There is no time like the present to address problems."</i>	
 <p>Vince Operations Manager</p>	<p><i>Vince ensures the timely and cost-effective delivery of products by managing the operations of several different departments. These include the Inventory, Engineering, Production, Plant Management, and Shipping and Receiving departments.</i></p>

Title	Operations Manager
Department	Operations

Demographics

Demographics	<ul style="list-style-type: none"> ▪ 57 years old ▪ Bachelors in Process Engineering
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Work

Environments	<ul style="list-style-type: none"> ▪ Private office, but spends a lot of time on the go within the company
Goals	<ul style="list-style-type: none"> ▪ Increase profit by getting a quality product out on time with the best customer service possible ▪ Support the strategic goals of the company ▪ Maintain financial controls over expenses ▪ Provide various departments with what they need when they need it ▪ Keep employee turnover low by bringing in excellent employees ▪ Minimize inventory of both raw materials and finished goods

Roles	<ul style="list-style-type: none"> ▪ Production Manager ▪ Operations Manager ▪ Business Analyst ▪ Customer Service Provider ▪ Expeditor ▪ Policy Maker ▪ Mediator ▪ Personnel Support Overseer
Core Activities	<ul style="list-style-type: none"> ▪ Decision making ▪ Problem solving ▪ Ongoing management and review of staff and production ▪ Ongoing business analysis to determine production issues
Communication, Collaboration, and Interactions	<ul style="list-style-type: none"> ▪ Communicates with clients and suppliers by using their preferred method ▪ Communicates primarily with the production staff and also the staff in QA, Materials, Product Design, Process Engineering, Purchasing, Planning, and Sales ▪ Communicates with the Shop supervisor about upcoming, weekly plans and schedules ▪ Communicates with project leaders who deal with specific customers ▪ Meets with product design and sales staff ▪ Meets frequently with each of the program and project managers ▪ Participates in meetings with clients to discuss project deadlines and deliverables ▪ Tracks all staff in the plant ▪ Works with the Materials manager to develop reports that match the company's business systems and also track them
Persona Variables	<ul style="list-style-type: none"> ▪ Operations managers are typically found in core, mid-market manufacturing companies ▪ In small production companies, a Production manager generally fills this role ▪ In distribution companies, a Materials manager generally fills this role ▪ In companies where the Operations manager is the VP of Operations, the actual day-to-day production planning is handled by a Production Planner
Pain Points	<ul style="list-style-type: none"> ▪ Only 5 percent of the company's computer system capability is used to facilitate daily operations ▪ Company relies far too much on paper documentation instead of using the computer system ▪ Losing valuable time when the system crashes ▪ Not being able to retrieve information from the system to complete job tasks ▪ Not enough hours in a day ▪ Amount of time that was used to manually enter all the historical data into a new system ▪ Details of daily production activity not being available until after midnight, because of the backup schedule ▪ Amount of difficulty in tracking inventory and trying to find out how much inventory is on hand ▪ Forecasts that are really off ▪ Constantly following up with the Sales department in order to know where the breakdowns occur between Sales and Production ▪ Having to figure out how to move purchase orders through the system with a minimum amount of pain, because the Production department gets tired of taking sales requests

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Psychographics

Computer Skills, Knowledge, and Abilities	<ul style="list-style-type: none"> ▪ Word, Excel, Outlook ▪ Fax machine
Values, Fears, and Goals	<ul style="list-style-type: none"> ▪ Always wants to know why something happened, not just the consequences or the results ▪ Appreciates when a system is streamlined, or when he receives solid data, and can then see the immediate results of that
Technology Attitudes	<ul style="list-style-type: none"> ▪ Wants every person to have access to any information they need to do their job
Interactions	<ul style="list-style-type: none"> ▪ Interacts with the Warehouse, Purchasing, Production, Materials, and Shipping and Receiving managers during daily, half-hour meetings to review sales order reports and solve any problems ▪ Interacts with senior management in the Sales and Purchasing departments during weekly meetings to review sales orders and plan the upcoming week ▪ Interacts with customers to provide purchase estimates
Communication Style	<ul style="list-style-type: none"> ▪ Pulls together people all day long, in groups of two and three, to resolve problems ▪ Calls specific individuals by phone if that resolves a problem ▪ Uses email when he needs to send information to five or more people ▪ Prints out and distributes important emails that could affect someone's work ▪ Posts bar charts throughout the production areas to show staff what the production numbers are
Business Intelligence Questions	<ul style="list-style-type: none"> ▪ Is our labor efficiency up or down and why ▪ Is inventory trending up or down, what is causing the fluctuation ▪ Should we add a new product line, how will that impact the production of existing products ▪ Will we hit our revenue targets for the month ▪ How many units should we make for the discount stores ▪ How can we reduce costs ▪ Will we get the product out in time to our key customers, or in time for key product launches ▪ What do we need to do to make sure products get out in time

Get to Know Vince

Hi, my name is Vince and my goal is to drive profit for the company. I do that by having a set of strategic goals, bringing in excellent people to meet those goals, and keeping them inspired and motivated.

I manage several different departments and keep communication going between the Warehouse, Purchasing, Production, and Materials manager, including other managers, to meet our schedules. I spend only a small amount of time on the phone and rely on brief conversations, one-to-one, to get things resolved.

I usually spend about 20 to 30 minutes on the floor every morning. If there are problems, it can take a lot longer than that. After we have set up for the day's production, there is no specific schedule. Instead, I'm running all day long, and it's not uncommon for me to put in a 10-hour day.

I handle a lot of personnel matters that include personality conflicts, reviews, training, complaints, and arguments about priorities. It's also my job to keep up morale and keep people motivated so that staff turnover remains low. Plus, I have to know everyone's job so empty positions can be filled when we are short-staffed.

For me, it's not enough just to keep things going. We also have to find ways to get new products, buy new equipment, and develop new processes – anything that will give us a competitive edge.

A day in the life

7:30 – 8:00 AM	<ul style="list-style-type: none"> ▪ Get a cup of coffee ▪ Read through email messages and respond to the urgent ones first ▪ Complete international phone calls
8:00 – 8:30	<ul style="list-style-type: none"> ▪ Walk through the shop to see how things are going at each station ▪ Check in with the machine operators and the Shop Floor manager to see if there are any problems
8:30 – 10:00	<ul style="list-style-type: none"> ▪ Review the Sales Bookings and Shop Floor reports ▪ Get briefed by Production and check the load for each department and the flow of the jobs ▪ Get all the Operations departments together to plan the day, prioritize jobs, and address any exceptions or large orders ▪ Discuss any potential delays
10:00 – 12:00	<ul style="list-style-type: none"> ▪ Approve specifications and drawings ▪ Answer the Purchasing department's questions about prices and quantities ▪ Respond to breakdowns and machine maintenance ▪ Drop in on Engineering to anticipate work order issues ▪ Respond to a key customer's questions about their orders
12:00 – 1:00 PM	<ul style="list-style-type: none"> ▪ Eat lunch on the go
1:00 – 4:00	<ul style="list-style-type: none"> ▪ Resolve work stoppages if the line goes down ▪ Approve purchases of capital equipment with the CFO ▪ Deal with multiple personnel matters
4:00 – 7:00 PM	<ul style="list-style-type: none"> ▪ Work on strategic plans and other engineering issues related to new products or processing ▪ Get confirmation from the Production department that all the work orders for the day are closed ▪ Read the rest of the email messages to see what requires a response ▪ Go home

Primary Roles

Production Manager	<ul style="list-style-type: none"> ▪ Plans or approves the plan for managing the demand for materials ▪ Manages inventory ▪ Breaks down projects into labor and materials and estimates the subcontractor requirements ▪ Works with the Sales department on forecasting
Troubleshooter	<ul style="list-style-type: none"> ▪ Anticipates the various ways that production problems can arise ▪ Manages risk by developing a plan for production overflow ▪ Stays close to operational needs by walking through the production area on a daily basis ▪ Communicates daily with the Production manager and Planner to review operations
Status Checker	<ul style="list-style-type: none"> ▪ Produces a weekly tracking and scheduling report that reflects all the departments ▪ Reviews orders, job assignments, and readiness to begin work with all the machine operators, the Shop Floor manager, and with Production management
Decision Maker	<ul style="list-style-type: none"> ▪ Participates in make-buy and make-drop decisions ▪ Collaborates with other members in senior management on which ERP system to buy ▪ Follows up on IT problems with the software vendor
Problem Solver	<ul style="list-style-type: none"> ▪ Resolves engineering issues related to new product development, new product releases, the capacity required for new products, and the feasibility of manufacturing a proposed product ▪ Resolves emergencies stemming from jobs that have not been completed ▪ Resolves problems with assembled products that have component parts that are not aligned ▪ Resolves any problems identified in daily briefings with Production
Efficiency Strategist	<ul style="list-style-type: none"> ▪ Maintains productivity by off-loading customer requests to Sales when necessary ▪ Prioritizes customer responses ▪ Continually evaluates production efficiency ▪ Works to maximize production across all the cost centers ▪ Works with Production and Process Engineering to improve staff efficiency ▪ Approves the development of new processes or the purchase of new equipment
Quality Control Contact	<ul style="list-style-type: none"> ▪ Communicates to the Quality and Production managers any problems about products that are in the field ▪ Tracks issues about product defects
Meeting Leader	<ul style="list-style-type: none"> ▪ Leads a weekly meeting about the production schedule with the Production, Materials, Warehouse, Purchasing, and Planning staff ▪ Leads a weekly meeting with design and process engineers on job design, processes, and specifications ▪ Leads a weekly production meeting to review inventory count, project status, and metrics ▪ Schedules formal meetings or presentations with other department heads when needed

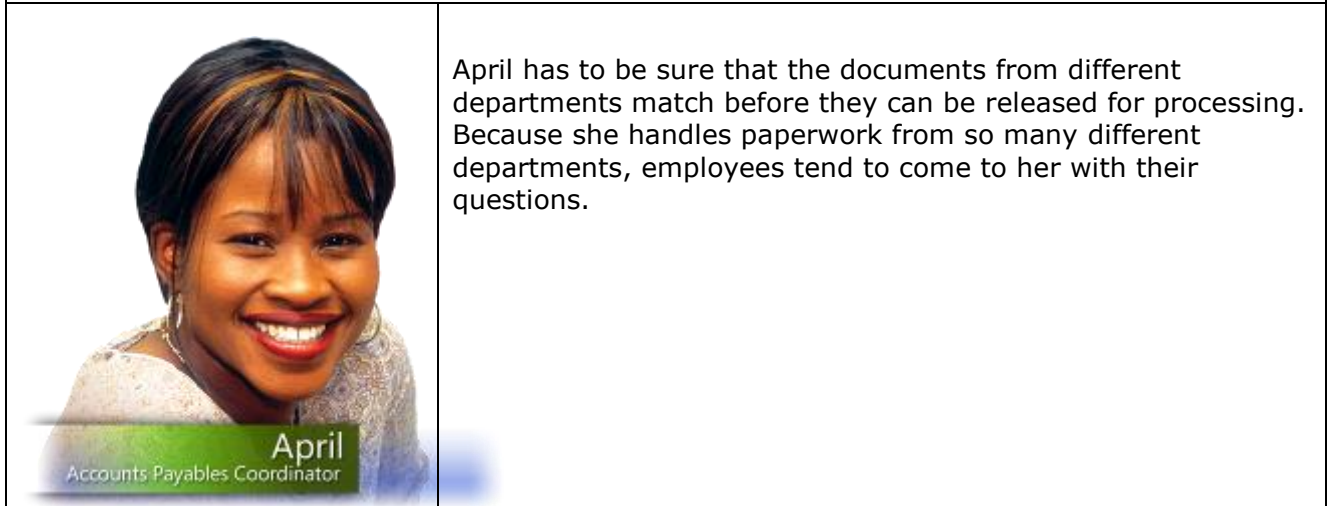
Cost Controller	<ul style="list-style-type: none"> ▪ Estimates the cost of a job by using either partial or complete MRP information ▪ Monitors budgets and approves expenditures ▪ Performs post mortem reviews of projects and programs to determine areas for improvement ▪ Monitors and follows up on deviations in cost variance
Scrutinizer	<ul style="list-style-type: none"> ▪ Monitors adjustments made to inventory by Receiving ▪ Identifies which high-priority orders Production needs to fill for the upcoming day ▪ Reviews projected Sales reports ▪ Reviews Shop Floor Capacity reports

Secondary Roles

Customer Service Provider	<ul style="list-style-type: none"> ▪ When necessary, responds to key customer inquiries or complaints about delivery of their orders ▪ Occasionally quotes jobs and checks customer purchase orders for accuracy
Expeditor	<ul style="list-style-type: none"> ▪ Facilitates communication among the staff about relevant issues ▪ Serves as backup for the Purchasing Agent ▪ Provides information on quantity and price to the Purchasing manager
Policy Maker	<ul style="list-style-type: none"> ▪ Drafts personnel policies related to all production and manufacturing operations ▪ Drafts strategic plans, policies, and procedures for Operations and Manufacturing
Personnel Support Overseer	<ul style="list-style-type: none"> ▪ Implements company employment policies and procedures ▪ Motivates employees and responds to employee concerns ▪ Mediates personnel issues and conflicts between machine operators that could interfere with production ▪ Mediates between project managers to resolve job completion and production conflicts

April – Accounts Payable Coordinator

"People have no clue about how much work we have to do to get things paid."



Title	Accounts Payable Coordinator
Department	Finance

Demographics

Demographics	<ul style="list-style-type: none">▪ 32 years old▪ 2 years of vocational training in Finance▪ 10 years of experience in Accounts Payable
Market Size and Influence	<ul style="list-style-type: none">▪ An AP Coordinator is generally not included in the decision-making process to buy a new ERP system▪ If an AP Coordinator is involved, the focus is on the efficiency of the system to handle invoices and payments

Work

Environments	<ul style="list-style-type: none">▪ Small cubicle in busy accounting area▪ Adjacent to accounting co-workers▪ Surrounded by multiple filing cabinets
Goals	<ul style="list-style-type: none">▪ Stay on top of everything▪ Have everything paid within a fixed number of days from receiving the invoice

	<ul style="list-style-type: none"> ▪ Have everything finished by the end of the day ▪ Don't hold up anyone else's work
Roles	<ul style="list-style-type: none"> ▪ Accounts Payable Coordinator ▪ Cash Management Coordinator ▪ Bank Management Coordinator ▪ Payroll Support Staff ▪ Petty Cash Manager
Core Activities	<ul style="list-style-type: none"> ▪ Manages all AP transactions ▪ Processes supplier invoices ▪ Double-checks invoices for accuracy ▪ Processes credit card payments to suppliers ▪ Matches invoices to appropriate shipping and receiving paperwork and purchase orders ▪ Submits a list of invoices to be paid to the Accounting manager or Controller for review and approval ▪ Creates payments and creates electronic payments ▪ Prints checks and obtains signatures ▪ Mails out payments ▪ Helps close the AP portion of books ▪ Identifies 1099 suppliers and sends out the forms ▪ Reimburses employees for travel and expenses ▪ Assists with payroll as needed ▪ Resolves small banking errors and researches service fees ▪ Confirms that all numbers on the receipts match the numbers on the purchase orders and invoices ▪ Troubleshoots any numbers that do not match
Communication, Collaboration, and Interactions	<ul style="list-style-type: none"> ▪ Reports to the Accounting manager ▪ Interacts periodically with the Controller who has final approval over payments ▪ Interacts with almost every department ▪ Interacts with co-workers to answer questions about reimbursements and purchase orders ▪ Interacts with suppliers by email and phone
Persona Variables	<ul style="list-style-type: none"> ▪ Moderate and complex finance departments will have an Accounts Payable Coordinator ▪ In AP-heavy companies or if the accounts payable processes are more manual, there may be several AP Coordinators and an AP supervisor
Pain Points	<ul style="list-style-type: none"> ▪ Amount of time required to deal with discrepancies and disputes ▪ Amount of time required to deal with all the paperwork ▪ Amount of detailed information required to do the job ▪ Amount of time involved in trying to find out who to pay ▪ All the time spent tracking down people who are supposed to provide information ▪ Tediousness in correcting posted transactions ▪ Tediousness and repetitiveness in entering invoices manually ▪ Difficulty in trying to find out which ledger accounts to use for transactions ▪ Difficulty in tracking down all the different people who have to approve supplier invoices and payments ▪ Dealing with lengthy and involved vendor invoices and trying to enter them into the system

	<ul style="list-style-type: none"> ▪ Dealing with the end-of- the-month paperwork ▪ Interruptions all day long ▪ Stacks of paper on the desk at the end of the day
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Psychographics

Computer Skills, Knowledge, and Abilities	<ul style="list-style-type: none"> ▪ Outlook, Word, Excel ▪ ERP system ▪ Fast data entry skills ▪ Multiple company forms
Values, Fears, and Goals	<ul style="list-style-type: none"> ▪ Concerned at times that software will replace her job or take away some control, but recognizes that automation can also make the job easier ▪ Skeptical about bank reconciliation being fully automated and not having a human interaction component
Technology Attitudes	<ul style="list-style-type: none"> ▪ Comfortable with using technology for online processing and job tasks
Communication Style	<ul style="list-style-type: none"> ▪ Prefers face-to-face communication with co-workers to get questions answered ▪ Relies on email in order to create a paper trail when resolving issues ▪ Determines which co-worker requests are truly urgent and determines which ones to respond to ▪ Tries to minimize time spent on the phone ▪ Strives to be pleasant on the phone when dealing with vendors

Get to Know April

Hi, my name is April. I have worked in accounting for 10 years and have been working in the AP department at this company for three years. Most people here have no idea about all the work we do or about all the paperwork that is involved in getting bills paid.

Our department has to make sure that the documents from all the other departments match before we can process invoices and pay bills. I also spend a lot of time tracking down people just to get the information I need to fill in all the gaps in the invoices. Plus, I have to track down management to get the approvals and signatures we need to process invoices and payments.

Because I generally handle the AP paperwork for the entire company, everyone tends to come to me with their questions. Some days, I just want to turn off the phone in order to get work done. If I had an office instead of a cubicle, I would be able to close the door so I could at least do the end-of-the-month work without interruptions.

A day in the life

8:00 – 9:00 AM	<ul style="list-style-type: none"> ▪ Finish any tasks from the day before, including reconciling cleared checks with bank statements ▪ Open and organize incoming mail, email messages, and faxes
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9:00 – 11:30	<ul style="list-style-type: none"> ▪ Match purchase orders and packing slips to invoices ▪ Resolve any invoice and purchase order discrepancies
11:30 – 12:30 PM	<ul style="list-style-type: none"> ▪ Copy, print, and sort all items that need to be filed
12:30 – 1:30	<ul style="list-style-type: none"> ▪ Have lunch at desk
1:30 – 2:30	<ul style="list-style-type: none"> ▪ Enter invoices into the system ▪ Enter new vendor information into the system
2:30 – 3:30	<ul style="list-style-type: none"> ▪ Respond to email messages and phone messages about invoice discrepancies ▪ Run Aging report and determine who needs to be paid ▪ Do a preliminary check run and get approval signatures
3:30 – 5:00 PM	<ul style="list-style-type: none"> ▪ Start work on bank reconciliation tasks ▪ Work on month-end or period-end closing tasks ▪ Clear desk and organize work for the next day ▪ Go home

Primary Roles

Accounts Payable Coordinator	<p>Processes invoices</p> <ul style="list-style-type: none"> ▪ Receives invoices and organizes them by company name and invoice number ▪ Confirms that all invoices are correctly coded ▪ Enters all invoices into the system ▪ Enters all supplier information and transactions, such as credits, into the system ▪ Researches discrepancies and answers questions about invoices ▪ Tracks down information for invoices that have invalid codes ▪ Tracks down and resolves inconsistencies in invoices ▪ Manages all invoice issues ▪ Handles disputed invoices <p>Pays the bills</p> <ul style="list-style-type: none"> ▪ Selects items that need to be paid and gets approval ▪ Generates the form of payment and gets the required signatures ▪ Sends out the payments ▪ Prints out a report with all the check numbers and the amounts after preparing a batch of checks ▪ Processes credit card payments to suppliers ▪ Processes credits from suppliers ▪ Processes any voids, corrections, or issues that affect supplier invoices ▪ Issues stop payments and reissues checks when necessary <p>Monitors company policy</p> <ul style="list-style-type: none"> ▪ Confirms that requests for travel and expense reimbursements are valid ▪ Checks that information is entered into the system only when it is complete and accurate ▪ Closes the books ▪ Makes sure that all data is entered into Accounts Payable by the close date
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	<ul style="list-style-type: none"> ▪ Researches any questions about the data entered into the system ▪ Assists in running reports for supervisors and management ▪ Identifies 1099 payees and sends them the required forms
Cash Management Coordinator	<p>Monitors and reports on cash balances</p> <ul style="list-style-type: none"> ▪ Generates the Cash Requirement report for the Controller ▪ Handles the invoices and payments in foreign currencies and handles the conversion, when necessary ▪ Writes off any credit balances specified by the Credit manager or Collections department
Bank Management Coordinator	<p>Reconciles bank accounts</p> <ul style="list-style-type: none"> ▪ Retrieves bank statements and matches transactions in the system with those on the bank statement ▪ Prints out the check register ▪ Ensures that the books are balanced ▪ Uses the bank statement to obtain information about receipts and payments
Payroll Support Staff	<p>Supports payroll staff</p> <ul style="list-style-type: none"> ▪ Assists payroll staff in entering timesheet information
Petty Cash Manager	<p>Manages petty cash fund</p> <ul style="list-style-type: none"> ▪ Monitors and documents any pay advances ▪ Monitors and documents petty cash disbursements ▪ Makes bank withdrawals when the office needs something

Appendix 5 – References

[Microsoft Dynamics™ and the 2007 Microsoft® Office System: Delivering Business Value Through Interoperability Whitepaper](#)

[The People-Ready Business Whitepaper](#)

[Bill Gates “New World of Work” Executive email](#)

[Microsoft Dynamics Snap-In Brochure](#)

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