# ORACLE E-BUSINESS SUITE APPLICATIONS FOR IBM SERVERS

## SIZING AND PLANNING QUESTIONNAIRE

Questionnaire Version 6.2l July 2001



For worldwide sizing requests, send completed questionnaires to:

IBM Americas Techline Solution Sizing Center

West Chester, Pennsylvania

e-mail: <u>eSizings@us.ibm.com</u>

Phone: (770) 835-6690 Tollfree: (800) IBM-0222 Fax: (770) 659 5245

A publication of the IBM/Oracle International Competency Center

## **TABLE OF CONTENTS**

1.0	Introduction	2
2.0	Instructions for Completing the Questionnaire	2
3.0	General Information Questions	7
	Configuration Questions	
4.0	Quick Sizer Questions	11
5.0	Detailed Sizer Questions	13

## 1.0 Introduction

The purpose of this questionnaire is to collect information to estimate the IBM hardware requirements for the implementation of Oracle e-Business suite applications on zSeries, pSeries, xSeries or IBM mixed environments.

It is important to understand that "sizing" the hardware for each customer's Oracle Applications implementation is an interactive process, which may be refined and repeated a number of times. If you are in the early stages of planning, you will probably have limited information about your planned environment. In this case, we can complete the sizing estimate with general information about your Oracle Applications users (see quick sizer section). When you are further along in your implementation planning, you will know more about Oracle e-Business Applications, the modules you plan to use, the number of users and your potential transaction activity. At that time, you may request another sizing estimate based on more detailed information. In any case, after receiving the results of a sizing estimate, you may choose to revise your input and request a re-sizing. At the Solutions Sizing Center, we will be happy to work with you throughout this process.

This questionnaire is maintained by the IBM/Oracle International Competency Center. It is updated periodically to reflect changes on Oracle and IBM products and to incorporate feedback that we receive from the field, through IBM Solutions Sizing Center. The IBM Oracle e-business suite applications sizing methodology uses information from Oracle Corporation's Application Implementation Methodology (AIM), IBM/Oracle Competency Center sizing studies and benchmarks and actual data from customer experiences. The sizing estimate is based on input from the completed sizing and planning questionnaire.

IBM assumes no liability for the results of the sizing study. It is presented "As-Is" and reflects the best knowledge that we have on this subject at that time of the sizing study.

## 2.0 Instructions for Completing the Questionnaire

In general, hardware sizing for Oracle Applications is user-based, and you will be asked to specify numbers of users of the various Oracle Applications modules. In addition, you will be asked for information about your batch workload, hardware environment, implementation schedule, etc. It will not be necessary for you to complete all sections of the questionnaire. Before you begin to complete the questionnaire, read all of the instructions in this section. A summary of the steps to complete the questionnaire is listed below. Additional and, in more detail, information is described on the following pages.

- (1) Review the sizing methodology and terminology (if you are not familiar with sizing)
- (2) Complete Sections 3 and 4 of the questionnaire (general information).
- (3) Decide whether to complete the Quick Sizer or the Detailed Sizer
- (4) Complete either Section 5, Quick Sizer Questions, or Section 6, Detailed Sizer Questions.
- (5) Return the questionnaire to the IBM Solutions Sizing Center (Techline) address on cover page of this document

#### 2.1 Make Sure You Have the Current Version of the Questionnaire

Over time we revise this document and, before taking the time to complete it, make sure you have the most recent version. The current version of the questionnaire may be obtained from your IBM Representative or by downloading it directly from the IBM Solutions Sizing website at <a href="http://www.ibm.com/erp/sizing">http://www.ibm.com/erp/sizing</a>. A softcopy of the questionnaire may also be obtained by sending an e-mail request to the IBM Solutions Sizing Center at <a href="mailto:eSizings@us.ibm.com">eSizings@us.ibm.com</a>. To obtain a hardcopy of the questionnaire in the Americas, use the IBM FAX Server by calling 800-IBM-4FAX (request document number 9459).

## 2.2 Obtain Assistance if Necessary

Once you have the current version of the questionnaire, you will be able to answer the questions without having detailed knowledge of Oracle Applications. However, if you do need assistance, your IBM or Oracle Representative can obtain support through the IBM/Oracle International Competency Center (ibmoracl@us.ibm.com), or you can send your questions to the IBM Solutions Sizing Center at <a href="mailto:eSizings@us.ibm.com">eSizings@us.ibm.com</a> or call us at 800-IBM-0222.

## 2.3 Complete Sections 3 and 4 of the Questionnaire

Section 3 of the questionnaire asks general questions about you and your IBM and/or Oracle representatives. Section 4 asks questions about the IBM hardware and Oracle software that you plan to install. These sections are required for all customers.

## 2.4 Decide Whether to Complete the Quick Sizer or the Detailed Sizer

Review the questions asked in Section 6. If you have answers for these questions, then you should complete the *Detailed Sizer*. If you choose to complete the *Detailed Sizer*, we will be able to provide a more comprehensive sizing estimate. If you complete the *Detailed Sizer*, do not complete the *Ouick Sizer*.

If you have limited information about your Oracle Applications implementation, complete Section 5 of this questionnaire, the *Quick Sizer*. This section asks very general questions about your planned implementation and business volumes. If you do complete the *Quick Sizer*, **do not** complete the *Detailed Sizer*.

## 2.5 Sizing Methodology used in this document

The objective of the IBM Oracle Applications sizing methodology is to estimate the hardware resources required to support your peak hour of business processing. In the questionnaire, you will provide information about the online transaction and batch processing workloads that must be processed during this peak hour. Our philosophy is that if we size the hardware to provide acceptable response time for the peak application workload, then all workloads outside of the peak hour should also provide acceptable response time.

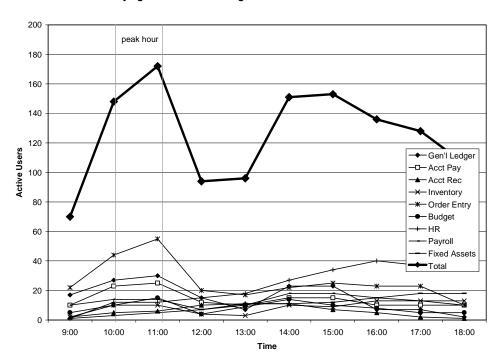
To complete the sizing and planning questionnaire, you must gather the following information:

- Your organization's peak hour of information processing
- The planned online transaction activity during the peak hour
- The batch processing workload

## **Identifying the Peak Hour of Processing**

Before you can specify your online and batch work volumes, you must identify your peak hour of processing. The peak hour is your busiest hour of activity from an information-processing standpoint. It is the hour when CPU utilization is the highest. In identifying your peak hour, consider how your processing volumes vary throughout the year and select the peak hour during the busiest time of the year. If you do not know the peak hour, you may need to survey the user departments of the various Oracle Applications modules.

Typically, the peak hour occurs somewhere between 8:00 a.m. and 6:00 p.m., but this can vary. In the illustration below, the thick line shows the number of active users of all of the Oracle Applications modules used in one organization, with the peak hour occurring from 10:00 a.m. to 11:00 a.m.



#### Identifying the Peak Processing Hour and Online Transaction Workload

## **Identifying the Online Transaction Processing Volumes**

Once you have identified the peak hour, you must identify the Oracle Applications functions that are in use during that hour (refer to the illustration above). For the *Quick Sizer*, you will identify the Oracle Applications *product families* that are active during the peak hour. For the *Detailed Sizer*, you will breakdown the product families by module. For example, in the *Quick Sizer*, you would indicate that Oracle Financials is active; for the *Detailed Sizer*, you would note Payables, Receivables, General Ledger, etc.

For each Oracle Applications product family or module, you will identify the number of users of the function. This information will be used to estimate the numbers of transactions processed for each Oracle Applications function, and the processor and main memory required to handle your online processing volumes.

In the *Quick Sizer* you will provide user information for each active Oracle Applications product family, specifying the numbers of *named users* and *active users*. Named users are licensed Oracle Applications users. Active users are those users who are actually executing the application transactions during the peak hour. In the *Detailed Sizer*, you will specify the numbers of active users of each Oracle Applications module for the peak hour.

In either case, you will record user information for the product families and modules that are in use *during the peak hour*. Do not record users or applications modules that are active outside of this peak time. If they are recorded, the sizing estimate will be larger than necessary.

## **Identify the Batch Processing Workload**

The next step is to identify the batch processing workload. In the *Quick Sizer*, you will simply estimate what percentage of the total workload during the peak shift is batch processing.

In the *Detailed Sizer*, you will tell us the size of each batch job in term of numbers of units. For example, for payroll processing, you will record the number of payroll checks processed. You will record batch volumes for every Oracle Application function that you plan to use. To establish the total system requirements, you will tell us when each batch job runs in relation to your peak online transaction processing (OLTP). You will note whether the batch job runs concurrently with your peak OLTP (peak-shift) or whether it runs at another time of day (off-shift). You will specify a window of time in which to complete the peak-shift batch processing, and a window of time in which to complete your off-shift batch processing.

By default, we use an 8-hour batch window when calculating the potential Oracle Applications batch workload. To calculate the total peak-shift workload, we combine the OLTP workload and the batch workload for the peak hour.

When we size your system, we convert all of your specifications into potential Oracle Applications workload. We determine the total peak-shift workload (OLTP and batch) and the total off-shift workload (batch only). If the total peak shift workload is greater, we size the system to handle the peak-shift workload. If the total off-shift workload is greater, we will size the system to handle the off-shift workload.

## 2.6 Terminology

- (e(logo)server) - generic name for all hardware servers produced and sold by IBM. It is comprised of the iSeries, pSeries, xSeries and zSeries, described in following entries.

**iSeries** - it is the brand that replaced As/400. A premier integrated business server, iSeries servers include groundbreaking copper and silicon-on-insulator processors, and industry leading logical partitioning. iSeries and OS/400 V5R1 can run Linux, Java, Domino, Windows, and UNIX and OS/400 applications in a single server. It stands for "integrated" series.

**pSeries** - it is the brand that replaced RS/6000. It uses RISC chips (PowerPC) and runs the IBM AIX operating system, the IBM's UNIX. It also runs Linux. It stands for "performance Series"

**xSeries** - it is the brand that replaced Netfinity. These servers combine the latest Intel processors -- from a uniprocessor to a 64-way SMP design. These industry-standard servers with X-architecture technology enhancements provide a level of reliability, performance and manageability previously out of reach for other industry-standard servers and runs Windows 2000/NT, Novell, and Linux operating systems. It stands for "x Architecture" Series.

**zSeries** - it is the brand the replaced the S/390 name. It uses CISC chips and runs z/OS (formerly known as OS/390 and yet previously known as MVS). It stands for "zero defect" Series.

**Oracle eBusiness suite** - set of applications modules for Financials, Manufacturing, Human Resources, etc. offered by Oracle. Sometimes it is simply called Oracle Applications and in this text the two terms are used interchangeable. It started as an ERP package but it now includes CRM and SCM products.

**Oracle RDBMS** - Oracle's relational database offering. Together with the eBusiness suite, these are the two main products from Oracle Corporation. In addition to them, Oracle provides an extensive set of tools and products in data mining, decision support and internet application servers. In general, in this text, we focus only on the two primary Oracle products.

**IOICC** - IBM/Oracle International Competency Center

## 2.7 Complete the Sizing Questions

Complete either the *Quick Sizer* questions or the *Detailed Sizer* questions.

## 2.8 Return the Questionnaire to IBM:

Send your completed questionnaire to IBM. If you have a hardcopy of the questionnaire, fax it to us. If you have a softcopy of the questionnaire, email it to us. Please return only the pages you filled-out, i.e., Section 3, Section 4, and either Section 5 or 6.

## **Send completed questionnaire to:**

**IBM Enterprise Applications Solutions Sizing Center (Techline)** 

e-mail: <u>eSizings@us.ibm.com</u>

Phone: (770) 835-6690 Toll free: (800) IBM-0222 Fax: (770) 659 5245

## 3.0 GENERAL INFORMATION QUESTIONS

Date \_\_\_\_\_

3.1

Please complete this entire section				
Company Name Street Address				
Street Address				
City, State/Province, Zip				
Country				
<b>Customer Contact</b>				
Title				
Phone Number				
Fax Number				
Email Address				
Industry and/or				
short Business Description				
IDM/Once le Colleg Contacte				
IBM/Oracle Sales Contacts				
IBM/Oracle Sales Contacts  Please tell us the name of your IB	RM and Oracle cales contacts. We will send the results of the cizing			
Please tell us the name of your IB	BM and Oracle sales contacts. We will send the results of the sizing epresentative, Oracle Representative, or IBM Business Partner.			
Please tell us the name of your IB estimate to the requesting IBM R				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)  Phone Number  Email Address				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)  Phone Number				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)  Phone Number  Email Address				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)  Phone Number  Email Address  Oracle Sales Contact				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative  Phone Number  Email Address  IBM Representative (alternat.)  Phone Number  Email Address  Oracle Sales Contact  Phone Number  Email Address				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative Phone Number Email Address  IBM Representative (alternat.) Phone Number Email Address  Oracle Sales Contact Phone Number Email Address  IBM Business Partner				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative Phone Number Email Address  IBM Representative (alternat.) Phone Number Email Address  Oracle Sales Contact Phone Number Email Address  IBM Business Partner Contact name at BPartner				
Please tell us the name of your IB estimate to the requesting IBM R  IBM Representative Phone Number Email Address  IBM Representative (alternat.) Phone Number Email Address  Oracle Sales Contact Phone Number Email Address  IBM Business Partner				

## 4.0 CONFIGURATION QUESTIONS (tell us about your installation)

The information you provide in this section will help us to complete the sizing estimate for your hardware/software environment. It includes questions about your planned hardware and software configurations. This will provides a better idea of where you are in the implementation cycle.

## 4.1 Current System

Answer the following question about your currently installed system (if applicable).

Question	Non-Production	Production	Neither
Are you currently running Oracle Applications? (Check ✓ all that apply)			
Current Oracle Applications software release?			n/a
Current Oracle Applications hardware systems/models?			n/a

Comments:					

## 4.2 Planned Oracle Applications Release

Which version of Oracle Applications are you planning to run? Check one.

✓	Release	Explanation
	R 10.7 NCA	Oracle Applications Release 10.7 NCA (network computing architecture)
	R 11.0	Oracle Applications Release 11.0
	R 11i	Oracle Applications Release 11i

## 4.3 Planned Hardware Platform

Which hardware platform(s) would you like to consider for the sizing estimate? Check  $(\checkmark)$  a database server and an application server option. If you want to consider more than one application server option, please describe each scenario in the comments section below.

✓	Database Server	✓	Applications Server
	ZSeries (S/390)	n/a	Zseries (S/390)
	pSeries (RS/6000) standalone		PSeries(RS/6000) standalone
	RS/6000 SP		RS/6000 SP
	NUMA-Q	n/a	NUMA-Q
	XSeries (Netfinity)		XSeries (Netfinity)

Comments:		1	

## 4.4 zSeries Questions

If you have chosen the zSeries platform, please answer the following questions:

Do you currently have an installed zSeries?	yes or no
If yes, which model of zSeries do you have installed?	
If yes, what is the current CPU utilization during your peak-processing hour?	%

## 4.5 Project Phase

Describe the key milestones and hardware requirements associated with your phased implementation of Oracle Applications. Indicate which Oracle Applications modules you plan to implement in each phase. If desired, you may copy and complete questionnaire Section 5 (the quick sizer) or Section 6 (the detailed sizer) for each phase, and attach each copy to your completed questionnaire.

Phase	Description	Hardware Install Date	Production Date
1			
2			
3			

Comments:				
-				
-				

#### 4.6 Disk Requirements

For this sizing, we will provide a rough estimate your disk requirements. If **you** have an estimate of your Oracle Applications user database requirements, please write it in the space below. If you would like to have a more comprehensive estimate of disk requirements, ask your Oracle Representative for the Oracle Application Disk Sizing Tool.

How much disk space do you need for your Oracle Applications user databases?	GB
--	----

## 4.7 Development, Test, and Other Non-Production System Requirements

Will your Oracle Applications implementation include any of the following systems? Check all that apply. For each system you check, indicate the number of concurrently active users during the peak business processing hour, and the total amount of disk space you want to allocate to the system.

✓	Non-Production Systems	Number of active users?	Disk space for this system?
	Development System		
	Test System		
	Sandbox System		
	Training System		
	Other		

## 4.8 High Availability Requirements

Would you like us to include high availability requirements in the sizing estimate? If so, please answer the following questions.

Do you want a failover system environment?	yes or no
If you want a failover environment for the database server, tell us the percentage of the total workload that needs to run in failover mode.	%
If you want a failover environment for the application server(s), tell us how many additional applications servers you want.	#

#### 5.0 **QUICK SIZER QUESTIONS**

If you have limited information about your Oracle Applications environment, complete this section and we will use the Quick Sizer for the sizing estimate. If you want a more comprehensive sizing estimate, skip this section and complete Section 6, Detailed Sizer Questions.

In section 5.1 you will be asked to identify the online user activity for each Oracle Applications product family in use during your peak-processing hour. In section 5.2 you will estimate the batch workload for the peak hour.

## 5.1 Online Transaction Processing (OLTP) Workload

For each Oracle Applications product family that will be in use during your peak-processing hour, tell us the numbers of *named users* and *active users*.

Named Users: Oracle Applications licensed users.

Active Users: Users who are actually executing application functions during the peak hour. Active users are a subset of named users. If you do not provide active user information, we will assume the number of active users to be 35% of the named users for each module.

To specify the active user information for each module, write the total number of active users in the Total column. Then, if possible, breakdown the active users into three categories: light, standard, and heavy workload users.

Light workload users are occasional users who complete one transaction every four or more minutes.

**Standard** workload users work at the rate of one transaction every three minutes. This is the default, and if you fill-in only the **Total** column, all users will be considered to be standard users.

workload users are power users who complete one transaction every two minutes. Faster Heavy rates should also be included in this category.

Note:  $Make\ sure\ the\ number\ of\ light\ users+standard\ users+heavy\ users=total\ users.$ 

Note: Do not double-count users. If a user will access more than one module during the peak hour,

count the user only for the module in which he/she spends the most time.

Note: Self Service users should be considered "Light" users, since they typically generate a much lighter transaction workload than a regular user.

Oracle Applications	Numbers of Users				
Product Families	Named	Active Users			
	Users	Total	Light	Standard	Heavy
Financials					
Supply Chain Management (SCM)					
Manufacturing					
Marketing					
Sales					
Service					
Human Resources					
Projects					
Self Service Applications				N/A	N/A
Others					
Totals					

## 5.2 Batch and Open Interface Processing Percentage

What percentage of the total system workload during your peak-processing hour do you expect to be batch processing?	%
Do you plan to load data from other systems using Open Interfaces?	YES/NO
If yes, what percentage of the total system workload during your peak-processing hour do you expect to be Open Interfaces processing? (the default value is 10% if YES is selected above).	%

## 6.0 DETAILED SIZER QUESTIONS

If you completed the Quick Sizer Questions in Section 5, it is not necessary to complete this section. The Detailed Sizer has three parts: 6.1 General Questions, 6.2 Online User Workload and 6.3 Batch Workload.

#### 6.1 General Questions

Answer the following general workload questions.

Question	Answer	Default
How many general-usage (working) hours per day?	hours	8 hours
What is the batch window for your peak-shift batch processing?	hours	8 hours
What is the batch window for your off-shift batch processing?	hours	8 hours

## 6.2 Online User Workload

For each Oracle Applications module that will be in use during your peak-processing hour, tell us the number of *active users*.

**Active Users:** Users who are actually executing application functions during the peak hour. Active users are a subset of named users (If you cannot specify active users, you must use the quick sizer instead of the detailed sizer).

To specify active users for each module, write the total number of active users in the **Total** column. Then, if possible, breakdown the active users into three categories: light, standard, and heavy workload users.

- **Light** workload users are occasional users who complete one transaction every four or more minutes.
- **Standard** workload users work at the rate of one transaction every three minutes. This is the default, and if you fill-in only the **Total** column, all users will be considered to be standard users.
- **Heavy** workload users are power users who complete one transaction every two minutes. Faster rates should also be included in this category.
- **Note**: Make sure the number of light users + standard users + heavy users = total users.
- **Note:** Do not double-count users. If a user will access more than one module during the peak hour, count the user only for the module in which he/she spends the most time.
- **Note:** Self Service users should be considered "Light" users, since they typically generate a much lighter transaction workload than a regular user.

Oracle Applications Module	Active Users				
, , , , , , , , , , , , , , , , , , ,	Total Light Standard Heavy				
Financials					
Assets					
Cash Management					
General Ledger					
Payables					
Property Manager					
Receivables					
Treasury					
Supply Chain Management (SCM	)				
Internet Procurement					
Inventory					
Order Management					
Purchasing					
Supplier Scheduling					
Supply Chain Planning					
Manufacturing					
Advanced Planning & Scheduling					
Bills of Material					
Product Configurator					
Cost Management					
Electronic Data Exchange					
Engineering					
Flow Manufacturing					
Master Scheduling/MRP					
Process Manufacturing					
Project Manufacturing					
Quality					
Work in Process					
Marketing			_LL		
Marketing					
Sales					
Field Sales					
Sales Compensation					
TeleSales					
Financial Analyzer					
Sales Analyzer					
Service					
Contracts					
Customer Care					

Oracle Applications Module	Active Users				
• •	Total	Light	Standard	Heavy	
Mobile Field Service					
Maintenance, Repair & Overhaul					
Service					
Human Resources					
Human Resources					
Payroll					
Training Administration					
Time Management					
Projects		1			
Activity Management					
Personal Time and Expense					
Project Analysis					
Project Billing					
Project Connect					
Project Costing					
Project Time and Expense					
Self-service Applications for the	Web	_			
Self-service Financials					
Self Service HR					
Self-service Purchasing					
Others					
Totals for all modules					

## 6.3 Batch Workload

In this table, tell us about your production batch processing. For each batch job:

- Indicate the number of batch units processed (e.g., for payroll tell us the number of checks processed).
- Next indicate how often the job runs, i.e. daily, weekly, or monthly.
- If applicable, indicate the number of periods processed per closing.
- Finally, note whether the batch job runs concurrently with your peak online transaction processing (peak-shift) or whether it runs at another time of day (off-shift).

Batch Job	Count	Schedule /day /wk /mo	Periods per Close	1 = Peak-shift 0 = Off-shift
General Ledger				
Account codes		n/a	n/a	n/a
Manual journal entry lines				
Imported journal entry lines				
Mass allocated journal entry lines				
Financial statements generated				
Other				
Accounts Payable				
Suppliers (vendors)		n/a	n/a	n/a
Invoices received				
Checks sent				
Reports				
Other				
Accounts Receivable		1		•
Cash receipts				
Debit memos				
Credit memos				
Checks received				
Invoice lines				
Reports				
Fixed Assets		1	I	
Asset additions				
Asset retirements				
Depreciation runs to GL				
Other				
Order Entry				•
Customers		n/a	n/a	n/a
Orders booked				

Batch Job	Count	Schedule /day /wk /mo	Periods per Close	1 = Peak-shift 0 = Off-shift
Average lines per order		n/a	n/a	n/a
Orders back ordered				
Orders released/picked				
Orders shipped				
Other				
Purchasing			L	
Suppliers		n/a	n/a	n/a
Requisitions				
Purchase orders				
Average lines per PO/requisition		n/a	n/a	n/a
Inventory			L	
Items tracked				
New items				
Quantity adjustments				
Other				
Bill of Materials				
Master items		n/a	n/a	n/a
Average number of BOM levels		n/a	n/a	n/a
Average items per BOM level		n/a	n/a	n/a
Average number of versions kept		n/a	n/a	n/a
BOM explosions				
MPS/MRP	L			1
Items planned				
Purchases released				
Work orders released				
MRP runs				
Work in Process				1
Average open work orders				
Material issues				
Reports				
Capacity		_		
Products planned	_			
Production lines				
Number of scenarios				
Average Routings Per Product		n/a	n/a	n/a

Batch Job	Count	Schedule /day /wk /mo	Periods per Close	1 = Peak-shift 0 = Off-shift			
Human Resources							
Employees		n/a	n/a	n/a			
Hires, terminations, retirements							
Applicants							
Payroll run size (# checks)							
Reports							
Other HMRS modules							
Projects			l				
Number of projects							
Cost transactions							
Billing transactions							
Burden calculations							
Requisitions							
Labor distributions							
Project summary reports							
Other Reports							