

State of Washington

Breakout Session

Applications Support and Development

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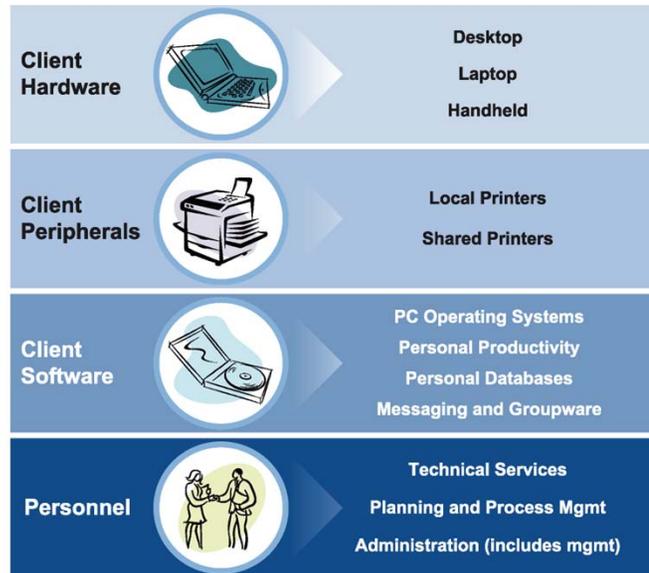
IT Service Area Overview

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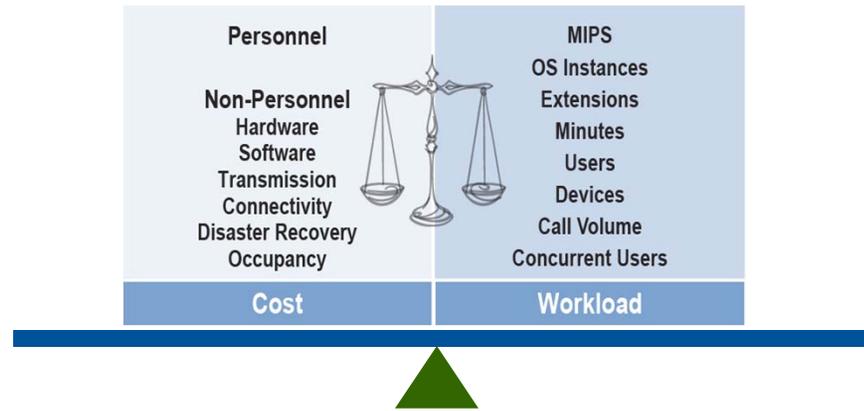
General Overview

Adherence to “Consensus Models” ensures comparability



- Based on operational expense
- Labor is not depreciated

Workload represents a provided service and is balanced with cost



To compare with actual spending, an organization’s workload is multiplied by their peers’ average unit cost

Sample

3,550	←	The organization’s installed PC count
x \$2,510	←	Peers’ average cost per PC
<u> </u>		
\$8,910,500	←	Peers’ cost for supporting the organization’s PC

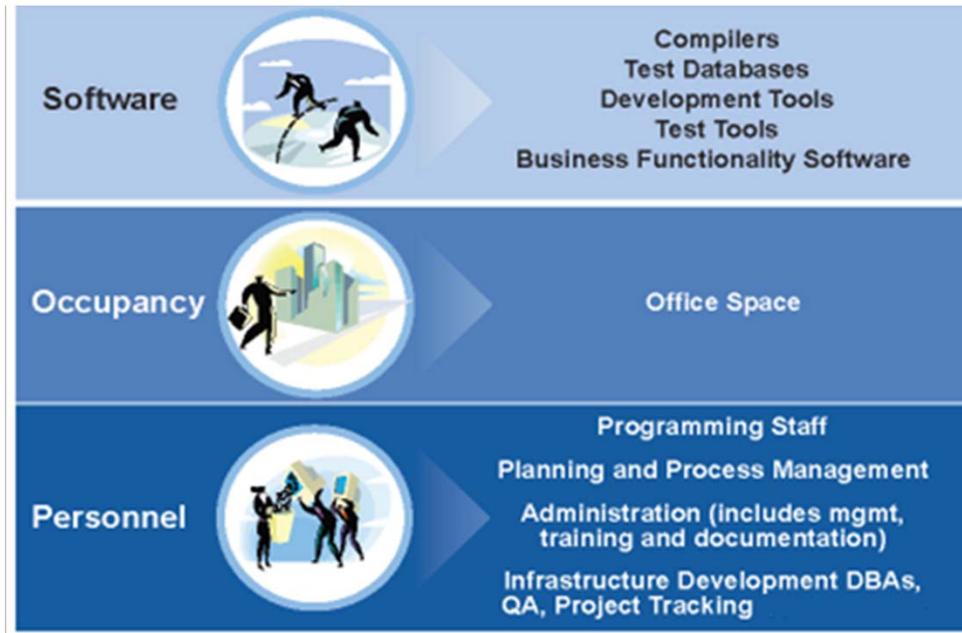
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Applications Support and Development



- This area examines IS efficiency and effectiveness with respect to the provisioning of applications support and development services
- Data will be collected in Excel spreadsheets. Support Guides will also be provided. The guides will provide data definitions.
- Cost, staffing and workload data should be included in the spreadsheet.

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Definitions of Applications Support and Development

Applications Support

- Maintenance of any duration
 - Problem Support and Resolution
 - Business Support
 - Corrective
 - Preventive
 - Adaptive
 - Perfective
- Functional enhancements
 - Less than or equal to two person-weeks

Applications Development

- Brand-new applications
 - Initiation
 - High Level Requirements
 - Detailed Requirements
 - Design
 - Build
 - Accept
 - Stabilize
- Functional enhancements
 - Greater than two person-weeks

Separate views for Applications Support and Applications Development

Application Support: This includes staff involved in supporting applications that exist within the current production portfolio. This includes bug fixes, small enhancements, conversions, code refactoring, re-platforming, language upgrades, etc.

Application Development: This includes staff involved in developing new applications, enhancing existing applications, installing new packages and installing major functional enhancements to existing packages.

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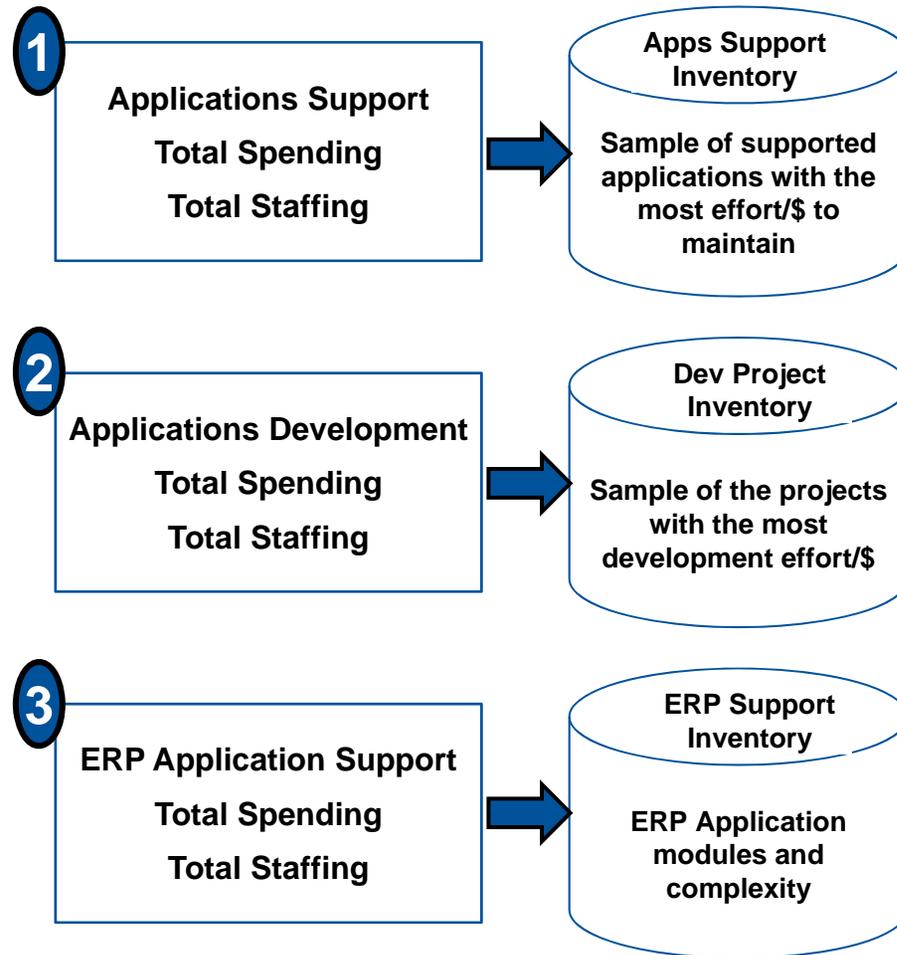
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Applications Benchmark Data Collection Overview

- 12 Month Study Timeframe
 - July 1, 2010 – June 30, 2011
- Up to 3 Views
 - Applications Support
 - Total Spending
 - Total Staffing
 - Inventory of select supported applications
 - Applications Development
 - Total spending
 - Total staffing
 - Inventory of select development projects
 - ERP Application Support (*if applicable*)
 - Total spending
 - Total staffing
 - Inventory of ERP application(s)



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Applications Support and Development – Spending and Staffing

Applications - Support							
Name	Total	Inourced	Outsourced	Outsourced	Outsourced	Contractor	Maintenance
Sourcing Type	Inourced	Inourced	DIS-Provided	Other State Dept	External to State	Contractor	Maintenance
Budget Type	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Spending							
Non-Personnel							
Software							
Development & Support Software	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Business Functionality Software	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Total Software	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Occupancy							
Unallocated (Non-Personnel)	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Total Non-Personnel	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Personnel							
Unallocated (Total Cost)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Staffing							
Programmer/Analyst	0.00	0.00	0.00	0.00	0.00	0.00	
Database Technology	0.00	0.00	0.00	0.00	0.00	0.00	
Quality Assurance/Testing	0.00	0.00	0.00	0.00	0.00	0.00	
Infrastructure Development	0.00	0.00	0.00	0.00	0.00	0.00	
Planning & Process Management	0.00	0.00	0.00	0.00	0.00	0.00	
Business Analyst	0.00	0.00	0.00	0.00	0.00	0.00	
Project Tracking	0.00	0.00	0.00	0.00	0.00	0.00	
Services Administration	0.00	0.00	0.00	0.00	0.00	0.00	
Management & Administration	0.00	0.00	0.00	0.00	0.00	0.00	
Total FTE	0.00	0.00	0.00	0.00	0.00	0.00	

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Applications Support and Development – Spending and Staffing (Cont)

- Spending and Staffing are grouped by Sourcing Types; this is the classification of who is delivering the service for which you are providing cost or head count:
 - Insource: includes the spending and head count for in-house resources.
 - Contractor: includes the spending and head count for contract labor that is supplemental to existing in-house staff and is “operationally” managed by in-house staff.
 - Outsource: includes the fees for outsource contracts in which outsource is defined as any situation where the full operational responsibility for IT services is completely handed over to an external service provider.
 - There are three columns for reporting Outsourced costs – Outsourced to DIS, Outsourced to another State of Washington agency, and Outsourced to an external service provider.
 - Maintenance: includes the fees for maintenance contracts (i.e., time and materials) that are not embedded in the purchase price of the asset and, therefore, are separable from depreciation. Maintenance is differentiated from outsource in that the asset is still managed internally with the staff calling in maintenance support as appropriate.

Applications Support and Development – Spending and Staffing (Cont)

■ Software

- Development and support software, including compilers and languages, databases, development and testing tools, and IS management software
- Business functionality software (e.g. COTS/ERP software maintenance)
- Include the cost (annual license fees) of software if it was incurred in FY2010. New software purchases should be included under Insourced Costs sourcing type. License renewal or maintenance costs should be included under Maintenance sourcing type.

■ Occupancy

- Occupancy charges in each service area should reflect the charges that relate to personnel (staff) occupancy only
 - Charges include costs for office space, furniture, electricity, maintenance, property taxes, security and office supplies.

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Applications Support and Development – Spending and Staffing (Cont)

■ Reporting personnel costs

- Report the actual monetary expense corresponding to all support resources included in the analysis. All costs are reported in actual values (not thousands).
 - For in-house staff, personnel costs include salary (including overtime pay), benefits and “other” employee costs such as travel and training.
 - “Benefit load” should include costs for bonuses, paid holidays, vacation, medical/dental coverage, life and accident insurance, retirement plans, stock plans, disability, social security, unemployment compensation, dependent care, tuition reimbursement and employee assistance programs (for example, physical exams, exercise programs and similar costs).
 - In all cost categories, include all applicable taxes (that is, federal, state and local). Exclude taxes only when recovered or refunded to the organization.
 - Exclude costs related to human resource department staff allocations, early retirement incentive bonuses and internal “cross-charges” for overhead.
 - For contractors and consultants, include all compensation that was paid directly to the individual.

Applications Support and Development – Spending and Staffing (Cont)

- Full-time equivalents (FTEs) are used in the Gartner TCO Model to define staff resources.
 - FTEs should be measured in calendar time. (For example, an individual who works full time on an assignment for one full year = one FTE.) Do not subtract such things as vacation time, sick days and administration time.
 - Furloughed time should be excluded from the count of FTEs.
- As you study your agency's operations:
 - Count FTEs by looking at the functions performed by the physical staff and for which they are responsible.
 - FTEs are assigned to service areas and model categories based on the functional definitions provided. If an individual or group performs more than one function, FTEs may be prorated between service areas or model categories based on client estimates of time spent in each area.
 - Do not count any one physical person as more than one FTE (for example, due to overtime).
 - One FTE may be prorated when not all of that individual's time falls within the scope of this analysis.

Applications Support and Development – Spending and Staffing (Cont)

- Personnel - Provide the total number of FTEs and associated personnel costs. Prorate staff between Applications Support and Applications Development. The total number should include FTEs that are performing the following functions:
 - Programmer/Analyst
 - Database technology
 - Quality assurance/testing
 - Infrastructure development
 - Planning and process mgmt.
 - Business analyst
 - Project tracking
 - Services Administration
 - Management & Administration

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Applications Support and Development – Spending and Staffing (Cont)

■ Personnel Categories

– Programmer / Analyst

- **This includes personnel devoted to developing new applications, enhancing existing applications or maintaining currently operational applications. These individuals may work on all phases of development including conceptual design, systems design, programming and testing of individual programs. Programmers/Analysts may have more than one distinct role such as performing development and support for a give application and should be prorated accordingly between the analysis views to avoid double counting. Typical roles include: Application Programmers, Application Developer Analysts, Systems Analysts and Package Configuration Staff**
- **Applications Support** includes staff who maintain currently operational applications. These individuals typically receive level two trouble tickets (defects). Support personnel then modify the application, as necessary, to meet these requests. When a problem call is determined to be a programming issue, or at least believed to be such, the time to diagnose and fix the problem is captured in the study. Personnel who are available to business users to assist them on applications-related problems or requests also are in this group. This also includes individuals performing enhancement projects that are less than or equal to two person-weeks.
- **Applications Development** includes personnel who work closely with customers, business analysts, and team members to understand business requirements that drive the analysis and design of quality technical solutions (new applications and functional enhancements to existing applications that are greater than two person-weeks of effort). Staff is involved in the full systems life cycle and is responsible for designing, coding, testing and implementing application software. Staff may make recommendations towards the development of new code or reuse of existing code. Responsibilities may also include participation in component and data architecture design, product evaluation and buy versus build recommendations. Has experience in systems analysis, design and a solid understanding of development, quality assurance and integration methodologies.

Applications Support and Development – Spending and Staffing (Cont)

■ Personnel Categories

– Database Technology

- **This includes personnel devoted to designing, evaluating, creating and maintaining the logical data definitions and structures used by the enterprise.** These personnel may be prorated between application development and support. This can involve evaluation of the requirements during the application design phase as well as advising developers doing logical database design and physical database design. This also includes personnel devoted to developing or maintaining test databases required for testing maintained code.
- Security, as it applies to data, should not be included at all in this evaluation, nor should those performing the following functions: physical support of the production databases including taking care of the actual physical structure of the space, knowing and using/installing the software associated with supporting the databases, applying patches and upgrades, diagnosing and resolving systems problems, creating the data space and managing the utilities related to performance (tuning) and backing up of the data.

– Quality Assurance/Testing

- **This includes personnel dedicated to testing or evaluating software before it is cut over to user testing or production.** These personnel may be prorated between application development and support. These individuals typically work with the development and support personnel and, at the appropriate time in the project life cycle, assume responsibility for determining fitness of the new or revised product. This would not include testing of individual programs that normally would be handled by the programmer/analyst personnel themselves. Coordinating user acceptance testing is included in the scope of the analysis. However, user acceptance testing performed by business staff is excluded from the analysis.

Applications Support and Development – Spending and Staffing (Cont)

■ Personnel Categories

– Infrastructure Development

- **This area includes software developers who are building software “building blocks” that serve no immediate user functional purpose but are the components to be used by developers when building future user software, (i.e., components such as middleware or base-class libraries).**

– Planning and Process Management

- This includes personnel associated with planning and **process-related activities** associated with the applications area. This would include people working on methodology, standards and metrics.

– Business Analyst

- This includes staff members who are familiar with **business processes and procedures that translate high-level business requirements into functional specifications and manage business requirements throughout the life of the project.** These staff may reside within the business, but work closely with the applications area. They must have strong business domain expertise and a reasonable understanding of how technologies can enable business opportunities and redesign.

– Project Tracking

- This includes personnel who are **devoted to monitoring the progress of projects** using standard project management techniques or applications as well as personnel who are assigned specifically to creating project estimates. These personnel may be prorated between application development and support.

Applications Support and Development – Spending and Staffing (Cont)

- Personnel Categories
 - Services Administration
 - Services Administration: This category includes staff dedicated to the budget, chargeback, service level reporting, product management, training and documentation, asset management, and account management.
 - Management & Administration
 - This category includes management and IS administration staff.

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Applications Questionnaire Review

■ Applications Support

- Support is the action of maintaining the functionality of an application (e.g., problem support and resolution, user support, small enhancements <2 weeks, technical upgrades and any projects that produces no new functionality for the end user).
- Snapshot of the total number of entities supported for production applications including in-house written software and purchased packages.
- Includes existing applications that were installed prior to the analysis year. Most of the applications will fall into this category.
- New applications are those that were installed during the analysis year.

■ Development Projects

- New development projects are those that create new applications or functionality.
- For new development, count *all* the entities requested.
- Enhancement projects are those that add, change or non-trivially delete existing functionality within an existing application.
- For enhancement projects, count *only* those entities that have been added to, changed or deleted from the underlying application(s).

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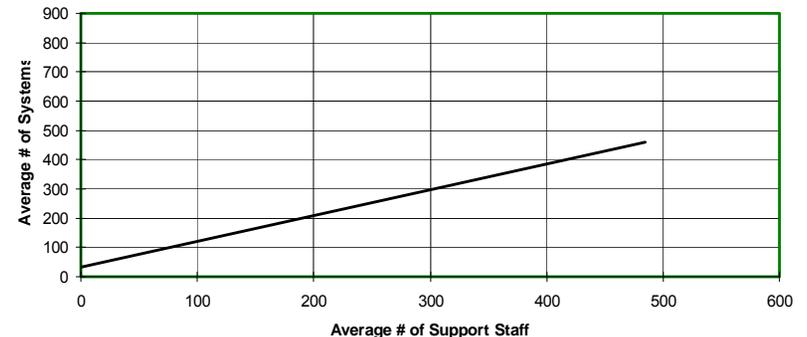
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Applications Support and Development – Inventory Analysis

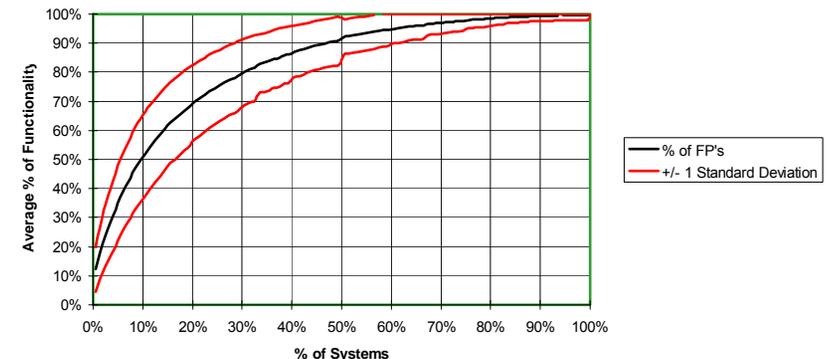
- Identifying a target sample of applications and projects to inventory is a first step in the analysis.
- The following approach is recommended to identify the representative sample of supported applications and development projects for the detailed inventory:
 - Compile separate lists of supported applications and development projects application. Rank the applications and development projects by the most effort to support/maintain or develop to the least.
 - Consideration should also be give to including applications and development projects that are most critical to the organization, high profile or have a significant impact on the organization’s performance.
 - Identify the subset of applications that represents 70%-80% of the total effort and complete the data requested on the detailed ‘Apps Support Inventory’ and ‘Dev Project Inventory’ tabs.

Support Staff vs. # of Systems



This information is taken from all completed studies. In an organization with a total of 100 support staff, there are ~120 applications.

% Systems vs. % Total Functionality



In order to capture 70%-80% of the functionality in the support portfolio, you need to gather data on 20-30% of the largest application systems.

Applications Support and Development – Key Inventory Attributes

- Inventory
 - Applications Support
 - General Characteristics
 - Vendor Packages
 - Technology Usage
 - Labor/Costs
 - Workload/Functional Size
 - Development Project
 - General Characteristics
 - Vendor Packages
 - Technology Usage
 - Labor/Costs
 - Workload/Functional Size
 - ERP Applications Support (SAP, Oracle E-Business, PeopleSoft, etc.)
 - General Characteristics
 - Named Accounts
 - Concurrent Users
 - Modules

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Applications Support – Key Inventory Attributes (Cont)

Respondent Name
Application ID
Application Name
Sizing Method
ADS Portfolio General
Year Installed
Months in Production during Study Year
Application Type
Application Architecture
Mainframe
Client Server
Web/Thin Client
Service-Oriented
Desktop/Client Only
Total
Package Customization (% Effort)
Interfaces to other systems
ADS Portfolio Labor and Costs
FTEs - Programmers/Analysts Only
Insource Labor
During Study Year
Contractor Labor
During Study Year
Outsourcer Labor
During Study Year
Outsourcer Costs
During Study Year

ADS Portfolio Size
Language Type (Lines of code)
Low Level Languages (Assembler, etc.)
3rd Generation Languages (Fortran, etc.)
COBOL
High Level Languages
Code Generators
Size Template
Logical Tables/Structures
Maintained / Used by Application
Logical Inputs (Screens)
Inputs Maintain / Browse Business Data
Background Processes
Logical Outputs (Reports)
Reports
Interfaces
Inputs / Outputs
ADS Portfolio Vendor Packages
Vendor Package Name
Version
Vendor Name
Annual Maintenance Fee
ADS Portfolio Defects
Total Number of Defects
Defect Severity (%)
Critical (Severity 1)
Major (Severity 2)
Minor (Severity 3)
Cosmetic
Total
Number of Service Requests Currently Open
Number of Service Requests Opened During Study Period
Number of Service Requests Closed During Study Period

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Applications Support – Key Inventory Attributes (Cont)

- Application
 - Name that identifies the particular application
- Year Installed
 - Implementation year for the application or year that the current version was implemented if substantially upgraded
 - Indicate the months in production during the study year if less than 12 months
- Application Type
 - In-house
 - Vendor Package
 - Outsourced
 - Outsourced and Vendor Package

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Applications Support – Key Inventory Attributes (Cont)

■ Application Architecture

- If the application is of one primary architect type, enter 100% in the appropriate section. If the application has multiple architectural components, provide a percentage breakout totaling to 100%.
 - Mainframe, Client/Server, Web/Thin Client, Service-Oriented, Desktop/Client Only

■ Package Customization

- If the application is a vendor package, indicate the amount of effort required during the 12 month analysis timeframe to support business-specific customization.
 - Very Low, Low, Medium, High, Very High

■ Interfaces to Other Systems

- The amount of effort required during the 12 month analysis timeframe to support integration of this application with other applications when changes to the system are made.
 - None, Low, Medium, High

Applications Support – Key Inventory Attributes (Cont)

- ADS Portfolio Labor and Costs (For Full 12 Month Study Year)
 - Insource support labor in full-time-equivalent person-years (FTEs)
 - Contractor /Temp support labor in FTE person-years
 - Outsourcer support labor in FTE person-years
 - Outsourcer costs
- Support Labor and Costs should include direct programmer/analysts

Applications Portfolio Sizing

■ ADS Portfolio Size

- Gauges relative magnitude. Extremely important to peer selection
- Include code built in-house plus code purchased in vendor packages (specifically the functionality in use that is supported)
- Gartner uses the industry standard unit of measure called a function point to size the workload in the applications area.
- Function points quantify the work performed for the end user independent of the technologies, processes or platforms that are utilized within the enterprise.
- As function point counts are not available in many organizations, alternatives are available to sizing the workload in support and development including the following:
 - Counted Lines of Code
 - Size Template
- Choose one sizing method per application to avoid double counting functionality, either counted lines of code by language type or size template.
- Gartner provides detailed guidelines regarding each of the various sizing techniques available which allow organizations that do not count actual function points to gain an understanding of performance to be able to identify improvement opportunities.

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Applications Portfolio Sizing (Cont)

■ Sizing — Lines of Code

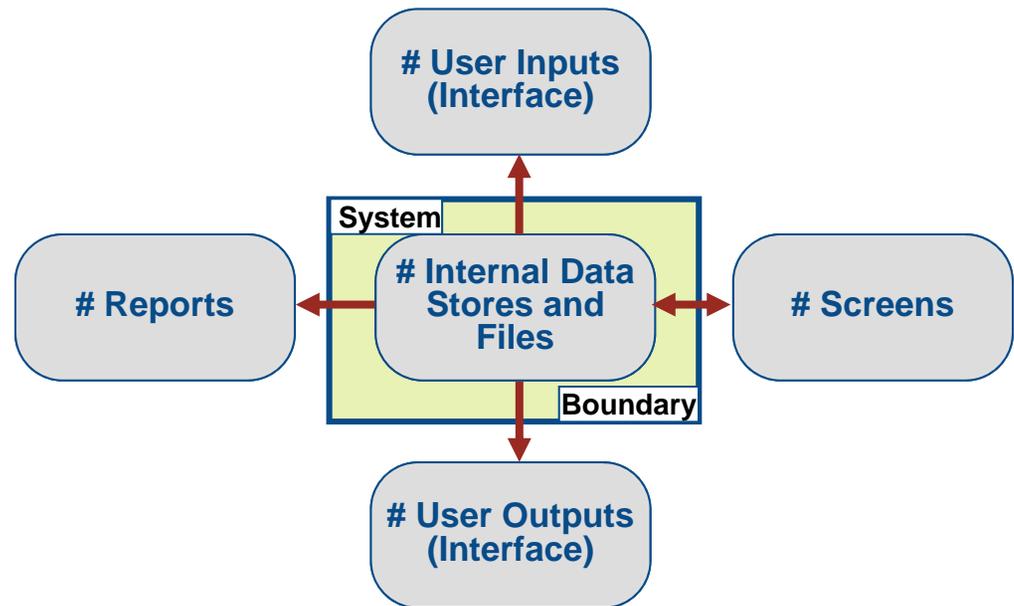
- Provide all lines of code by language for both in-house written code plus purchased software. Include the specific names and versions of the languages utilized. For packages, only include the lines that deliver functionality that is actually used by the user.
- Lines of code should include data definitions and executable code, discounting comment lines and blank lines.
- Macros or included copy code should be counted once.
- Each statement or instruction is considered to be one logical line of code. For example, a line of code can be a mathematical expression, data definition statement or action statement. Also keep in mind:
 - Multiple instructions per one physical line are counted individually.
 - An instruction that spans multiple physical lines is counted as one statement.
 - Programs that “paint” panels and include embedded screen layouts should have the screen design lines counted.

Applications Portfolio Sizing (Cont)

- Portfolio Sizing — Size Template Data
 - Used to estimate the functional size of the application if it is not already known
 - Adapted from formal Function Point counting methodology
 - Estimates functionality by identifying entities that correlate to the formal definitions
 - Looks at number of data structures, screens, reports, interfaces and background processes

Applications Portfolio Sizing (Cont)

- Gartner's Applications Workload is a mechanism to evaluate a system's capabilities from a user's point of view, and is based upon the various ways users interact with computerized systems.
- From a user's perspective a system assists them in doing their job by providing five (5) basic functions.
 - Two of these address the data requirements of an end user and are referred to as Data Functions.
 - The remaining three address the user's need to access data and are referred to as Transactional Functions.



Applications Portfolio Sizing (Cont)

- Support Application
 - Count “only” the functionality that the business user can access
 - For packages, vendors often ship “everything” and each organization will customize and configure differently
- For new application implementation, count the following:
 - “All” functionality that will be available when available to the business even if this is a pilot group (subset of users)
 - Multiple instances of the same application deployed to “new” users should only count functionality that is different from the core application
- For enhancement projects, count the modifications or the add, change and deletions to the existing application(s):
 - Tables, screens, reports, inputs/outputs that were added or deleted
 - Tables with modified data elements, new indices, structural changes
 - Screens with new data elements
 - Positional changes of data elements or static text do “not” count as a modification
 - Reports with new data elements

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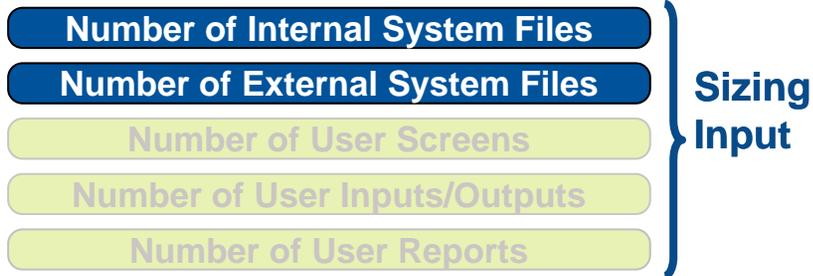
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Applications Portfolio Sizing (Cont)

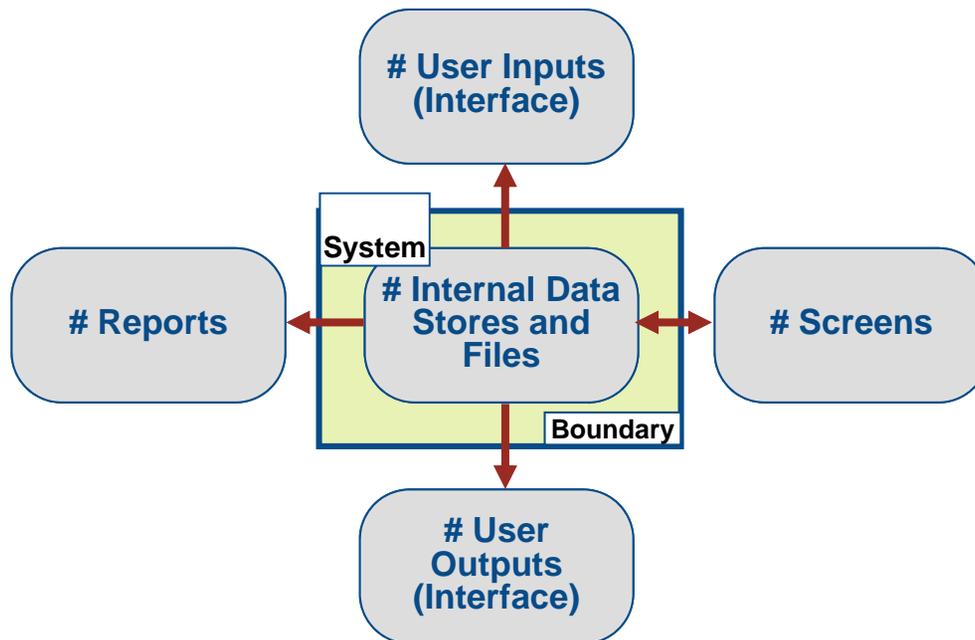
Sizing Calculation Fields



Number of System Files

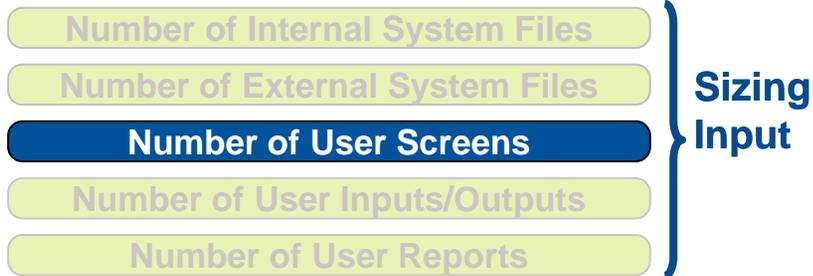
Number of Internal/External System Files is a value used in the calculation of portfolio size. This input refers to the number of logical tables and structures maintained by this system or referenced by this system

- Count “all” tables that are being touched (read or written to)
- Do “not” count tables with null rows or business users cannot use (i.e., temporary, work or sort files, standard backup files and tables embedded in program code)



Applications Portfolio Sizing (Cont)

Sizing Calculation Fields

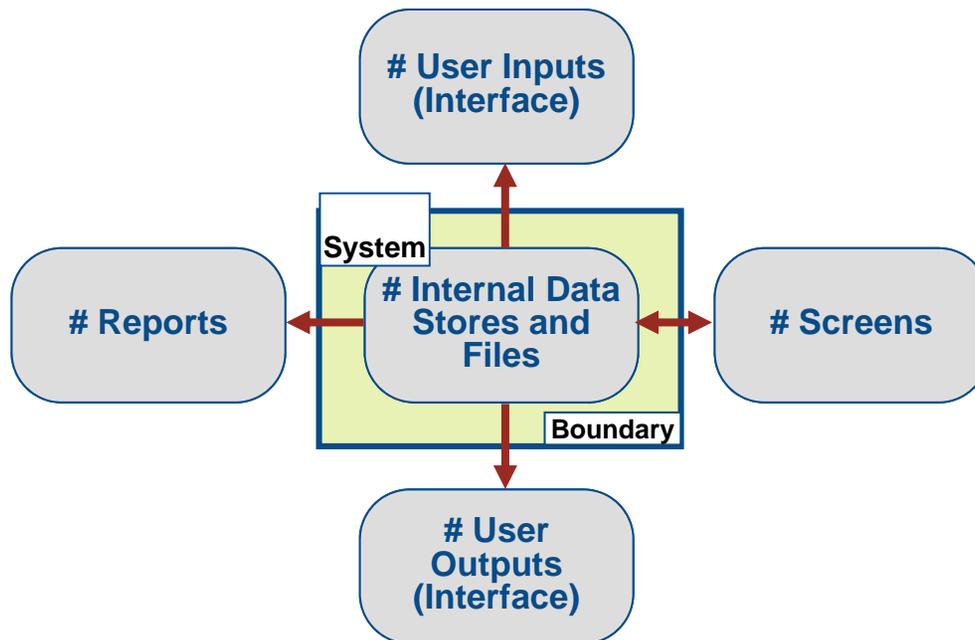


Number of User Screens

Number of User Screens is a value used in the calculation of portfolio size. This refers to the number of screens or forms that; display, inquire or maintain existing data.

This refers to the number of:

- Count all Screens and Queries initiated by business user or transaction
- Do “not” count navigation screens
- Do “not” count screens business users cannot use

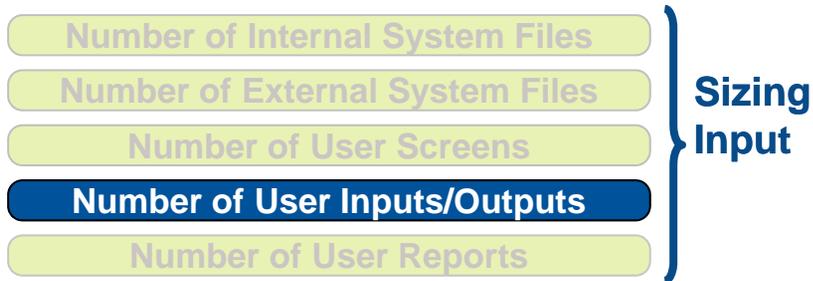


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Applications Portfolio Sizing (Cont)

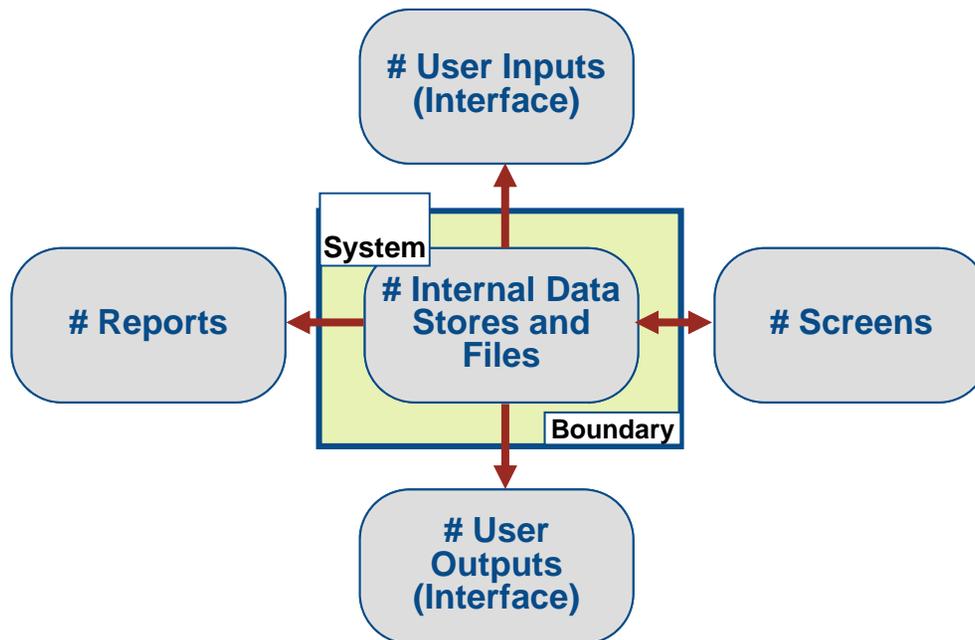
Sizing Calculation Fields



Number of User Inputs/Outputs

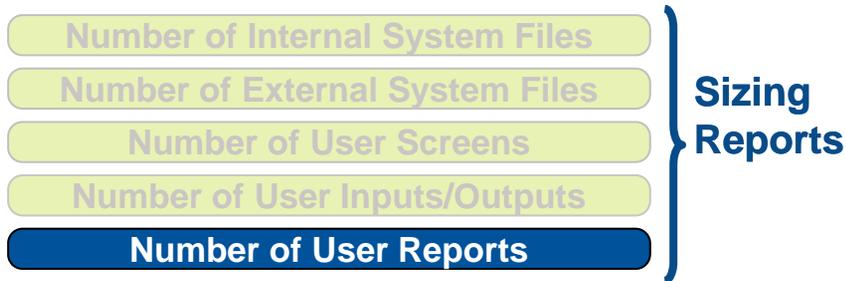
Number of User Inputs/Outputs is a value used in the calculation of portfolio size for a given system. This refers to the number of:

- Inputs/Outputs from other systems (where the system is the “user”)
- Count all Interfaces
- Count all feeds coming in our going out from “other” applications
- Count all feeds coming in or going out from “vendors”
- Background processes initiated by the end user or batch



Applications Portfolio Sizing (Cont)

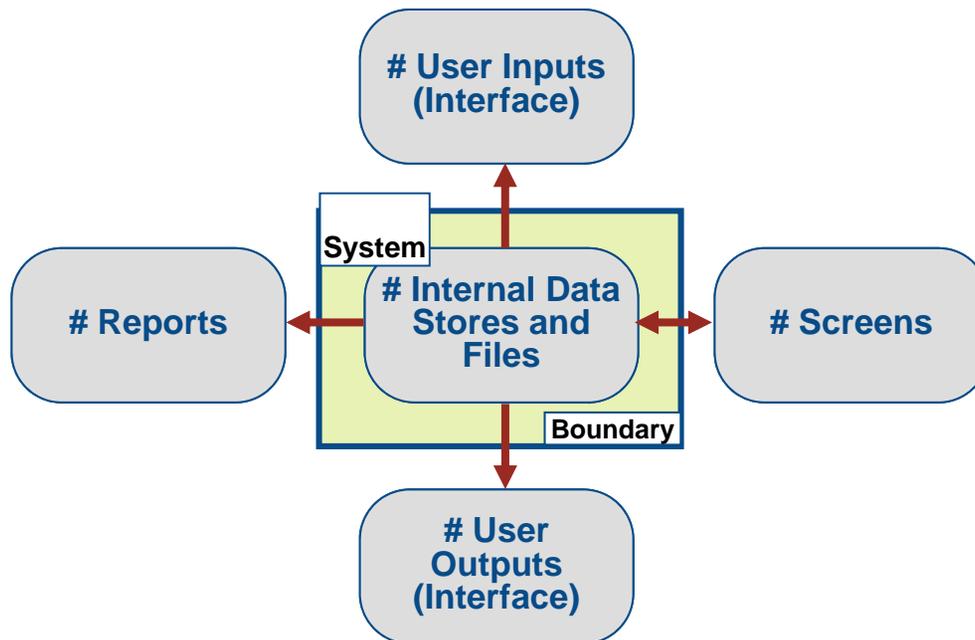
Sizing Calculation Fields



Number of User Reports

Number of User Reports is a value used in the calculation of portfolio size. This refers to the number of canned, ad-hoc or dynamic reports. This Output refers to the number of:

- Count “All” Reports created by IT
- Count Reports Initiated by the user or by Batch
- Do “not” count reports created by Business User (i.e., COGNOS or Business Objects)



Applications Support – Key Inventory Attributes (Cont)

■ Vendor Package Detail

- Provide the following If this application contains vendor package or COTS functionality:
 - Vendor package name
 - Version
 - Vendor name
 - Annual maintenance cost

■ Defects

- Total number of defects in the production environment (during 12 month study timeframe).
- Breakout of defects by severity

■ Service Requests

- Total number of valid requests for technical assistance (logged or unlogged) that occurred in support of the application portfolio during the 12-month analysis timeframe.
 - Number of Service Requests Currently Open/Open During Study Period/Closed During Study Period.

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ERP Applications Support – Key Inventory Attributes

- ERP Applications include SAP, Oracle E-Business and PeopleSoft
- Year Installed
 - Implementation year for the application
- Named Accounts
 - Total number of users with the ability to access the application.
- Concurrent Users
 - Total number of users expected to access a particular application concurrently at a given time during a representative time period.
 - Tip: Use average number of concurrent users expected rather than peak users. To calculate, choose a typical period (e.g., not a holiday or month-end) and take several snapshots at peak times of the day regarding production instances only.
- Modules

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Applications Development Projects – Key Inventory Attributes

Respondent Name
Project ID
Project Name
Sizing Method
ADS Portfolio General
Start Date
Month
Year
Implementation Date
Month
Year
Development Category
Application Type
Year-end Status
Application Architecture
Mainframe
Client Server
Web/Thin Client
Service-Oriented
Desktop/Client Only
Total
Package Customization (% Effort)
Interfaces to other systems

ADS Portfolio Labor and Costs
FTEs - Programmers/Analysts Only
Insource Labor
During Study Year
Before Study Year
Remaining Study Year
Contractor Labor
During Study Year
Before Study Year
Remaining Study Year
Outsourcer Labor
During Study Year
Before Study Year
Remaining Study Year
Outsourcer Costs
During Study Year
Before Study Year
Remaining Study Year

ADS Portfolio Size
Language Type (Lines of Code)
Low Level Languages (Assembler, etc.)
3rd Generation Languages (Fortran, etc.)
COBOL
High Level Languages
Code Generators
Size Template
Logical Tables/Structures
Maintained / Used by Application
Logical Inputs (Screens)
Inputs Maintain / Browse Business Data
Background Processes
Logical Outputs (Reports)
Reports
Interfaces
Inputs / Outputs
ADS Portfolio Vendor Packages
Vendor Package Detail (1)
Vendor Package Name
Version
Vendor Name
Purchase Price

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Applications Development Projects – Key Inventory Attributes (Cont)

- Most items are the same for development projects as in the support inventory tab. Exceptions and differences are listed as follows:
 - Project Name
 - Name that identifies the particular development project
 - Start Date
 - Date that requirements analysis began for this project
 - Implementation Date
 - Date the project was first released to the customer
 - Development Category
 - New
 - Enhancement
 - Year-end Status (at end of 12 month analysis timeframe)
 - Done
 - In progress
 - On hold
 - Dropped

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Applications Development Projects – Key Inventory Attributes (Cont)

- ADS Portfolio Labor and Costs
 - Insource support labor in FTE person-years
 - Contractor/Temp support labor in FTE person-years
 - Outsourcer support labor in FTE person-years
 - Outsourcer costs
- Development project labor and costs should include direct programmer/analysts
- Three labor and cost figures are requested for development projects
 - During study year (For Full 12 Month Study Year)
 - Before study year
 - Remaining

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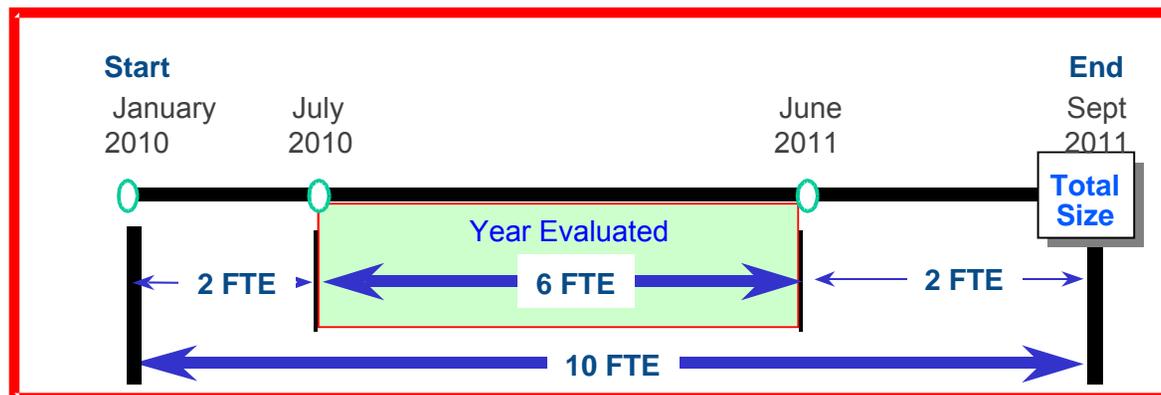
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Applications Development Projects – Key Inventory Attributes (Cont)

■ Guidelines for reporting labor and cost figures for development projects

- If the project started and finished during the study year, supply the development labor and costs for the 12 month analysis timeframe (During study year).
- If the project started before and was complete during the study year, supply the development labor and costs for the 12 month analysis timeframe and for the effort expended before and during the analysis time period (During study year plus Before study year).
- If the project started before and was incomplete at the end of the 12 month analysis timeframe, supply the development labor and costs expended before, during and remaining (During study year plus Before study year plus Remaining).
 - Labor ratio is used to prorate cost and functionality for projects that span multiple years so that they can be included in the 12 month analysis timeframe.



Applications Development Projects – Key Inventory Attributes (Cont)

■ Vendor Package Detail

- Provide the following If this project involves the implementation of a vendor package or COTS functionality:
 - Vendor package name
 - Version
 - Vendor name
 - Total purchase price
 - Example: Package acquisition cost

Case Study

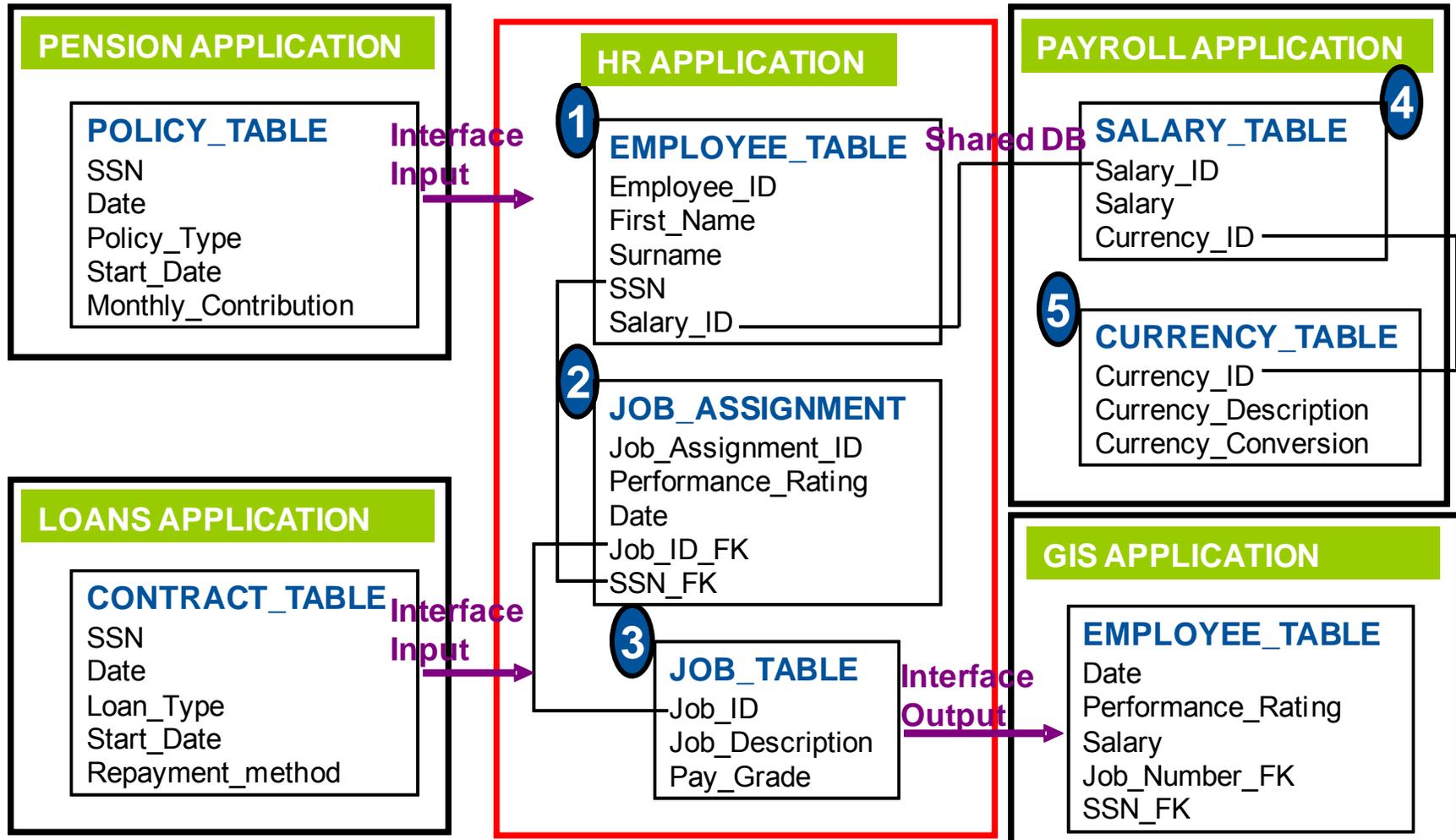
Application and Project Sizing Size Template

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Case Study

HR Application – Data Structures / Tables



Case Study

HR Application – Screens and Interfaces

UPDATE EMPLOYEE DETAILS 1

Employee ID

Name

Date of Birth

Sex

SSN

Job Description 2

Date Started

Pay Grade

APPLICATION INTERFACES - INPUTS

- 1 From Loans Application
Data from Contract Table– [5 fields]
- 2 From Pension Application
Data from Policy Table– [5 fields]

Case Study

HR Application – Reports and Interfaces

EMPLOYEE REPORTS

Employee Report 1- [3 fields]	1
Employee Report 2- [3 fields]	2
Employee Report 3- [10 fields]	3
Employee Report 4- [10 fields]	4
Employee Report 5- [30 fields]	5
Employee Report 6- [30 fields]	6

VIEW

PRINT

OUTPUT TO EXCEL

APPLICATION INTERFACES – OUTPUTS

To GIS Application

Data from Employee_Table – [5 fields]

3

Case Study

HR Application – Apps Support Inventory Summary of Sizing

Size Template	
Logical Tables/Structures	
Maintained / Used by Application	5
Logical Inputs (Screens)	
Inputs Maintain / Browse Business Data	2
Background Processes	0
Logical Outputs (Reports)	
Reports	6
Interfaces	
Inputs / Outputs	3

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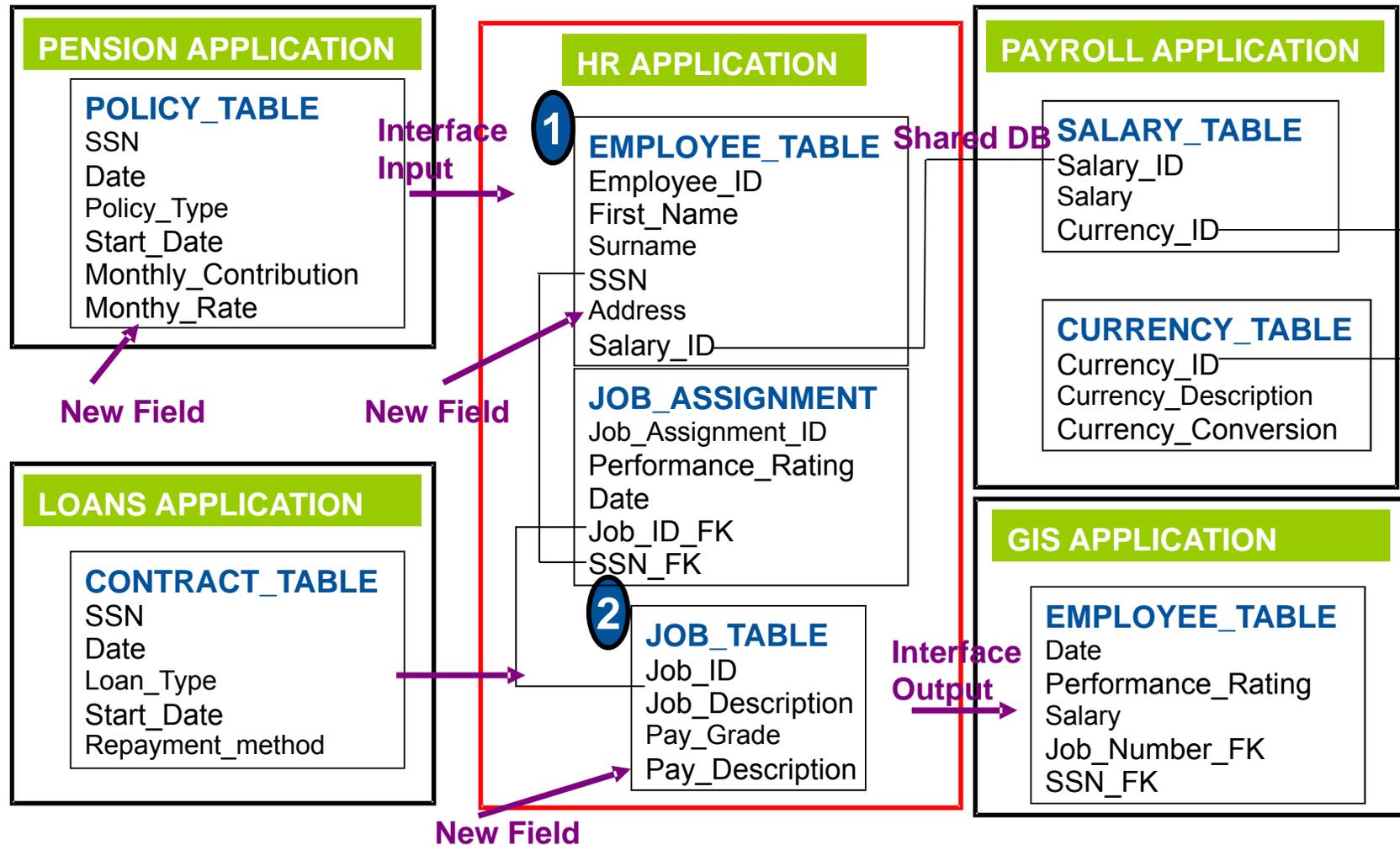
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Case Study

HR Application Enhancements – Data Structures / Tables



Case Study

HR Application Enhancements – Screens and Interfaces

UPDATE EMPLOYEE DETAILS

Employee ID

Name

Date of Birth

Sex

SSN

Job Description ▼

Date Started

Pay Grade Pay Description

New Field →

APPLICATION INTERFACES IN

From Loans Application

Data from Contract_Table– [5 fields]

From Pension Application

Data from Policy_Table– [6 fields]

1

New Field →

Case Study

HR Application Enhancements – Reports and Interfaces

EMPLOYEE REPORTS

- Employee Report 1 - [3 fields]
- Employee Report 2 - [3 fields]
- Employee Report 3 - [10 fields]
- Employee Report 4 - [10 fields]
- Employee Report 5 - [35 fields]** **1**
- Employee Report 6 - [35 fields]** **2**

5 New Fields per report

VIEW

PRINT

OUTPUT TO EXCEL

APPLICATION INTERFACES OUT

To GIS Application

Data from Employee_Table – [5 fields]

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Case Study

HR Application Enhancements – Apps Development Inventory Summary of Sizing

Size Template	
Logical Tables/Structures	
Maintained / Used by Application	2
Logical Inputs (Screens)	
Inputs Maintain / Browse Business Data	1
Background Processes	0
Logical Outputs (Reports)	
Reports	2
Interfaces	
Inputs / Outputs	1

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Wrap Up

- Questions and Comments
- Action Items, if any

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