



Q/P MANAGEMENT
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Can SAP be Function Point Counted?

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Introduction

- Can you function point count SAP?
- Why do you want to?
- What will it be used for?
- IS there a size for SAP?

Answer:

- OF COURSE YOU CAN COUNT IT
- Just approach it after doing proper analysis and keep the goal in mind

Agenda

- Problem
- Process Approach
- Function Point Counting Process
- Establish Scope & Boundary
- Establish Size Measures
- Determine Metrics
- Summary - Lessons Learned

Note: This presentation will not provide a size to SAP

Introduction

First of all, there are multiple reasons for obtaining a size for SAP

- Measure enhancement productivity of enhancing SAP
- Manage your vendors and how they apply maintenance to SAP
- Determine make-buy decision for purchased packages
- Determine the financial impact of an ERP implementation*

Sample Problem

- You have implemented SAP and want to prove that there has been a financial benefit to justify the actual cost involved
- This presentation will discuss an approach based on utilizing function point analysis techniques to establish a baseline for the SAP product and replaced application
- To succeed in the approach, a standard sizing measure must be utilized to establish the size for comparison

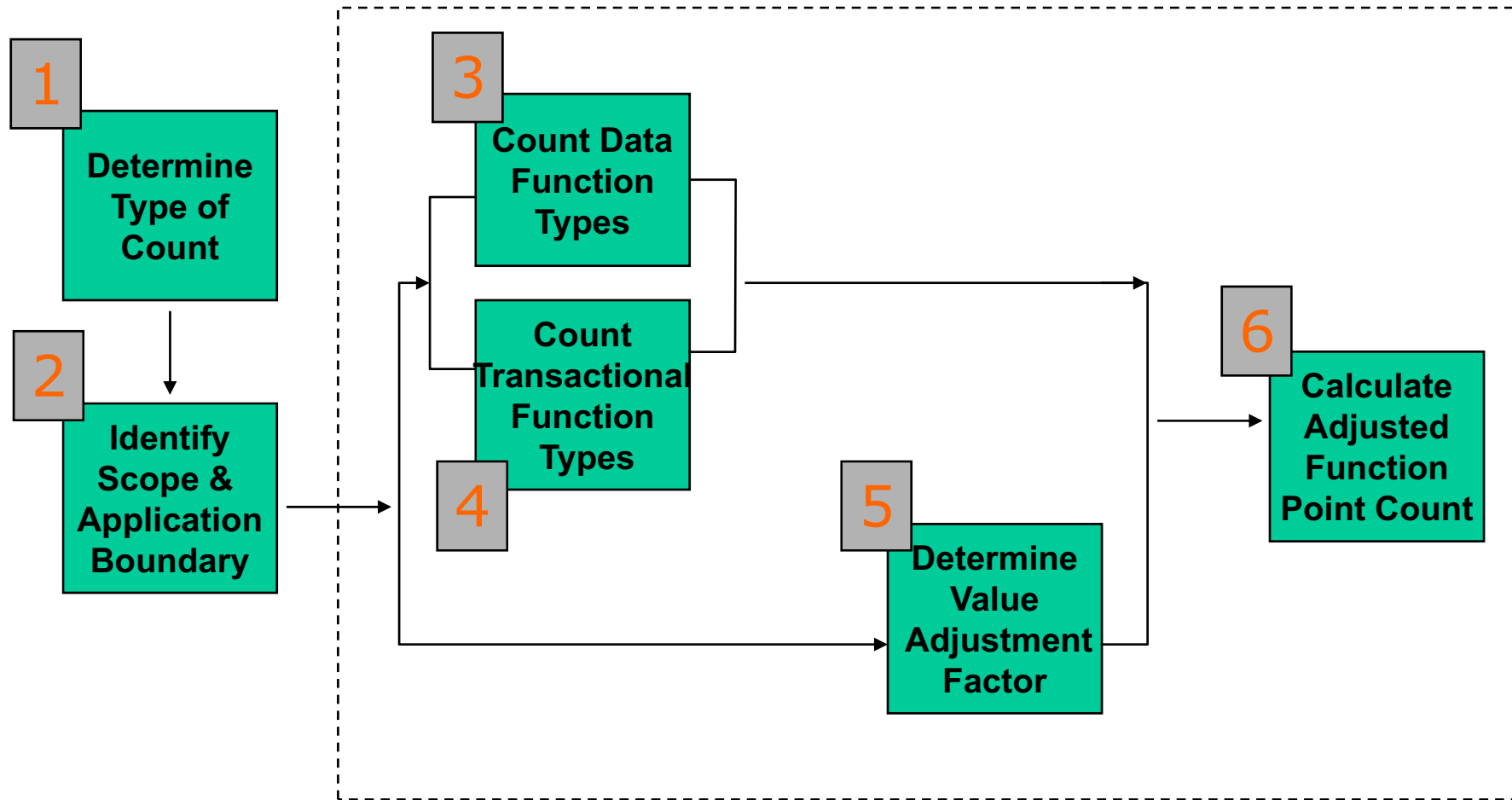
Process Approach

- Use IFPUG Function Point Counting Process
- Utilize Function Point Counting Practices Manual
- Baseline both applications to establish size measures
- Gather effort, staff, quality and support costs for the replaced application
- Gather project costs for the SAP implementation and support including customization, acquisition cost, ongoing upgrade and maintenance costs
- Be sure to estimate **ENOUGH** time to review each screen
- It is best to use an application expert (in-house or vendor) and sample data to analyze each function

Challenges

- Highly Customizable
- Time constraints
- Inherent capabilities of the package
- Knowledge of the package
- Separate developer tools
- Broad spectrum of functions
- Accurately defining the applications boundaries
- Highly integrated across the applications
- SAP package has grown over time

Function Point Counting Process



CPM v4.2

Determine Type of Count

Application Count *

- Associated with the installed application
 - Provides a measure of the current functions used
 - Also referred to as Baseline count
-
- Purpose of the count is to determine the basis for support rates measurement and to identify the baseline for comparison of costs
 - VERY Important Note: Determine what view needs to be sized – is it from the end-users view or the system administrators (i.e. configuration, customization)?

Identify Counting Scope

Counting Scope *

- Defines a (sub) set of the software being sized
- Is determined by the purpose for performing the count
- Identifies functions included in the count
- Could include more than one application

An application count, depending on purpose, may include:

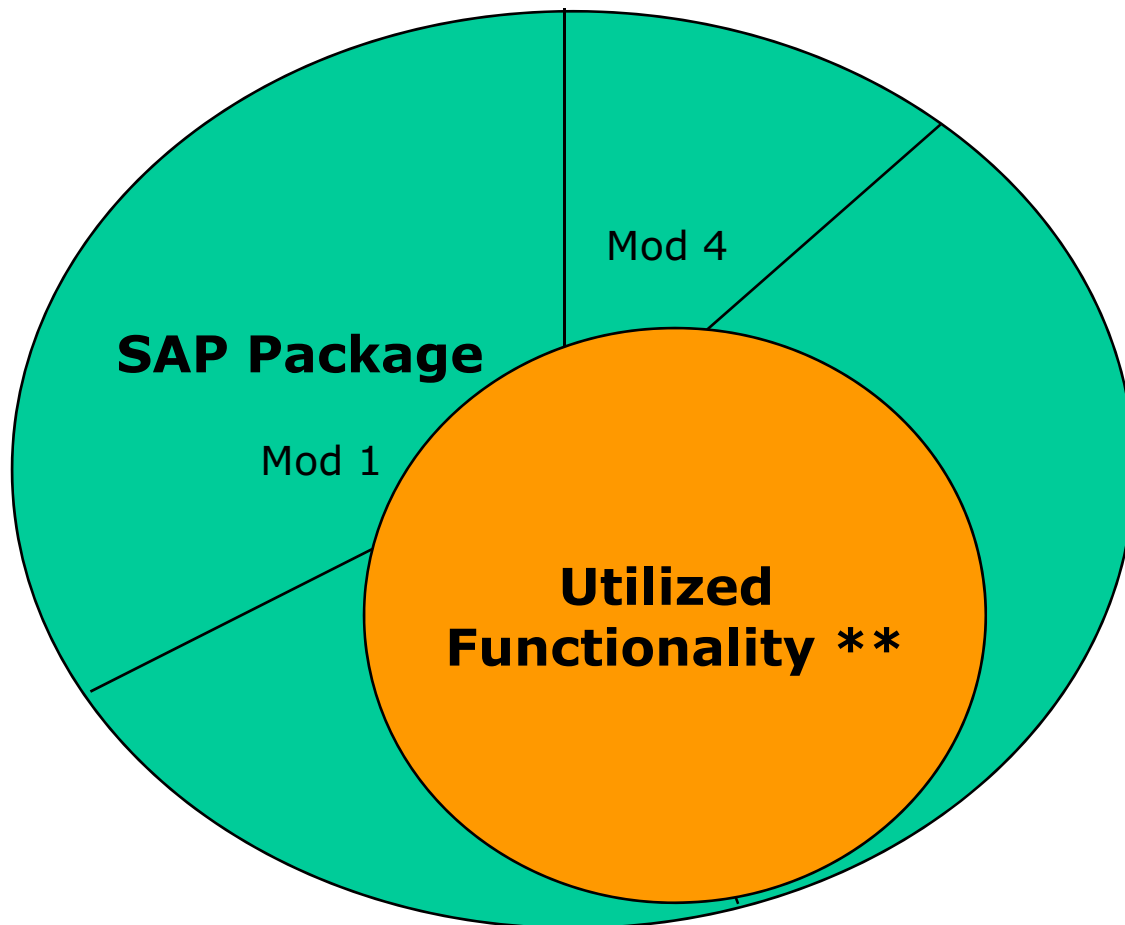
- Only the functions being used by the user, OR
- All functions available

Scope of this count is to include all installed and utilized software

- Count the functions being used by the end user and the system administrators
- Count additional functions created that are not supplied by the package

Establish Scope

Establish size based on functions utilized



**Utilized Functionality +
Additional Functionality**

= MAINTAINED SIZE

**Additional
Functionality *****

Identify Application Boundary

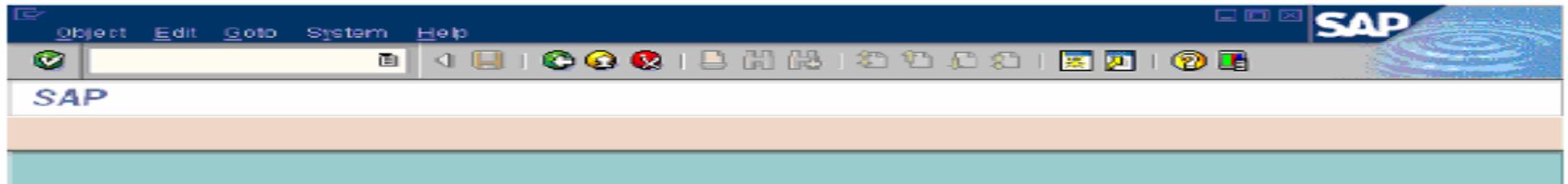
Application Boundary*

- Defines what is external to the application
- Is the conceptual interface between 'internal' application and 'external' user world
- Encloses the logical data maintained by application
- Assists in identifying logical data referenced but not maintained by this application
- Is dependent on user's external business view of application; not based on technical/ implementation

Depending on the modules utilized, the application boundary may be:

- One functional area
- Multiple functional areas

Sample SAP Modules



SAP Logistics Modules

- Material Management
- Logistics Execution
- Sales and Distribution
- Production Planning & Control
- Quality Management
- Plant Maintenance
- Project System

SAP Financial Modules

- Financial Accounting and Controlling

SAP Human Resources

- Personnel Management

SAP System Administration

- Basis Components

**SAPGUI, Unix, SAP ITS,
Router, Client Copy and
IDES**

Count Data Functions

Identify the ILFs and EIFs *

- SAP documentation includes a data dictionary or data relationship/data flow diagram
- Evaluate maintenance of files for business, reference and code tables
- Use current system documentation to size existing application (or a previous function point count)

Determine the ILF or EIF complexity and contribution *

- Based on the identified fields, determine whether tables are separate internal logical files, shared data, record element types or data element types
- Assign complexity based on RETs and DETs identified
- Typically ranges are sufficient for determining the complexity

Count Transactional Functions

Identify elementary processes *

- Identify primary intent of identified elementary processes and classify as an EI, EO, or EQ

Steps

- Analyze each screen and icons associated with the screen
 - There may be Add, Change, Delete, Copy, and multiple kinds of output ...
- Determine whether separate EP or part of the larger transaction
- Look for drill-down capability and tabs of information
- Only identify unique elementary processes (watch out for duplication)
- Keep customized transactions separate to identify setup work

Count Transactional Functions (Continued)

Determine the transaction complexity and contribution *

Steps

- Evaluate the fields and files accessed for each screen
- Remember to include log files, security, common or organizational tables as required by the user
- Identify each type of capability (such as help) supported by SAP and the existing application
- Count setup and customization functions as appropriate
- Count conversion transactions as necessary

Example

Vendor: INTERNAL

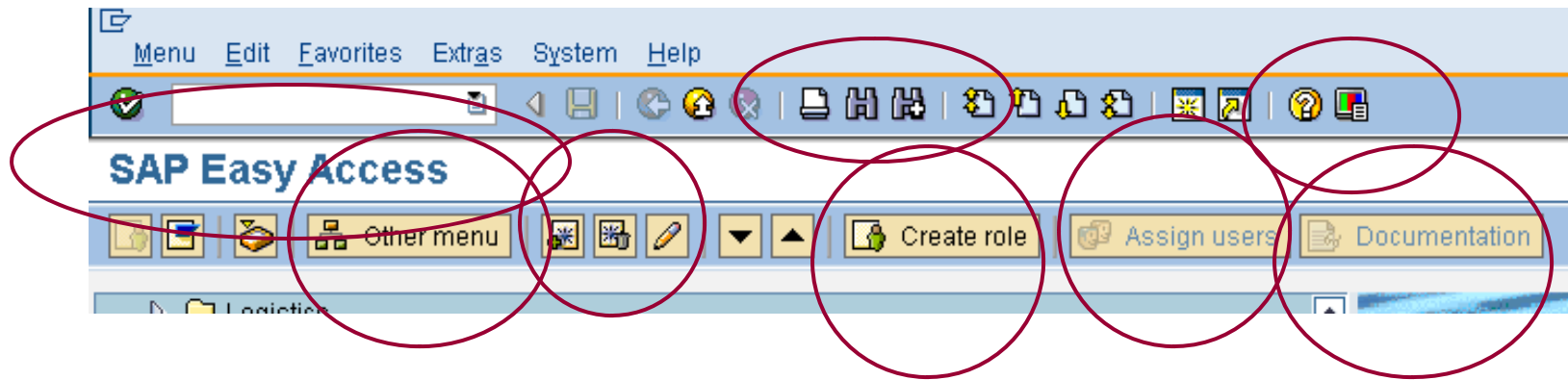
Buttons: Preview, Internat. versions

Name: [Field]

Search terms: Search term 1/2 [Field]

Street address: Street/House number [Field], Postal code/City [Field]

Example



Don't let the functionality overwhelm you,
only count each function once

Example

Airline	Flight no.	Date of flight	Fli Price	Currency	Plane type	Max. capacity	Occupancy	Booking total
LH	2402	28.01.2000	485,00	DEM	A321	220	202	92.329,45
		18.02.2000	485,00	DEM	A321	220	201	91.315,80
		12.05.2000	485,00	DEM	A321	220	93	42.359,90
		14.07.2000	485,00	DEM	A321	220	2	882,70
		25.08.2000	485,00	DEM	A321	220	29	13.196,85
		15.09.2000	485,00	DEM	A321	220	8	3.579,30
	2402						1.149	
	2407						1.098	
LH							5.237	

Example

The screenshot shows a software application window titled "Create Customer: General Data". The menu bar includes "Customer", "Edit", "Goto", "Extras", "Environment", "System", and "Help". The toolbar contains various icons for file operations and navigation. Below the menu bar, there are several tabs: "General Data", "Company Code Data", "Sales Area Data", "Additional Component", and "Additional Data, Empties". The "General Data" tab is active, showing a "Customer" field with the value "INTERNAL". Below this, there are several sub-tabs: "Address", "Control data", "Payment transactions", "Marketing", "Unloading points", "Export data", and "Contact persons". The "Address" sub-tab is selected. At the bottom of the window, there are buttons for "Preview" and "Internat. versions". A red oval highlights the "Address" sub-tab and the "Internat. versions" button.

Determine Value Adjustment Factor

- Evaluate each of the 14 general system characteristics *
- Add degrees of influence for all 14 general system characteristics to produce a total degrees of influence (TDI) *

1. Data communications
2. Distributed data processing
3. Performance
4. Heavily used configuration
5. Transaction rate
6. On-line data entry
7. End-user efficiency
8. On-line update
9. Complex processing
10. Reusability
11. Installation ease
12. Operational ease
13. Multiple sites
14. Facilitate change

Calculate Adjusted Function Point Count

Use the formula to calculate the size of the project or application *

Now you have your size

- **IMPORTANT NOTE:** *Make sure that you document the assumptions made for the count*

Summary - Lessons Learned

- SAP function point counting follows traditional function point analysis methods
- SAP has a **large** amount of functionality embedded in the modules, therefore plan appropriately to allow sufficient time to perform an accurate function point count
- Understand what viewpoint is necessary for sizing; administrative team or end-user (or both!)
- System experts are very important and essential in determining functionality utilized

Repeat with me ... Document Assumptions