



Q/P MANAGEMENT
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Measuring Maintenance Activities Within Development Projects - Impact Points

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Measuring Maintenance Activities within Development Projects - Impact Points

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Presentation Objectives

- Describe why Impact Points are deemed necessary
- Present the concepts of Impact Points and how they were developed
- Describe Q/P Pilot and Provide Examples of Impact Point Counts
- Present Impact Point Implementation Considerations and Recommendations

Why Impact Points?

- Client Driven due to Outsourcing
- Development/Enhancement Projects often include 'maintenance' activities not related to project requirements
- Development organizations often want to exclude activities incorrectly

Impact Points Objectives

Define a measure for projects that are 100% Non-FP countable or 'hybrid' projects

The measure should be:

- Consistent
- Repeatable
- Reasonable number of measures
- Unbiased and promote good development techniques

Impact Points - 'Idea' Process

- Gathered Q/P consultants and held brainstorming sessions on the types of projects the consultants have experienced that resulted in 0 FPs
- Consolidated brainstorming results into categories
- Held a separate session to develop measures for the various categories identified
 - Tested the 'technical' approach (e.g. # of files, # of tables updated, etc.) and found issues with consistency, conciseness, and development objectivity
 - Developed an initial approach for Impact Points (IP) based on past research related to testing measures

Impact Points – Example Categories from Brainstorming Sessions

- Table Updates – Tariff changes, rate changes, adding products and/or services, parameter/configuration changes
- Code/Text Changes – Static page updates, Web content updates, Cosmetic changes, Format changes, sort changes, adding or changing help or error messaging
- Data Management – Data migration, Database restructuring
- Technical – Multiple browsers, new sources of data (e.g. networks)

In all of the above, the functions that would be using the new text, updates, etc. would be identified as impacted functions and counted to calculate the Impact Points

Impact Points Concept

Use Impact Points to quantify the changes in non-FP countable projects

- Impact Points count the functions impacted by the non-FP countable activities
- Impact Points follow the same concept and process of FPs, but focus only on the non-FP countable projects and non-FP countable portions of 'hybrid' projects
- The IFPUG FP guidelines are used for defining the functions 'impacted', instead of the functions modified (added, changed, deleted)

Impact Points - Pilot Goals

- Pilot Goals
 - Demonstrate the IP counting process
 - Confirm that IPs can be counted for non-FP countable projects and ‘hybrid’ projects
 - Identify potential issues related to IPs
 - Determine the feasibility of developing templates
- Scope
 - Assess multiple projects
 - Include different types of non-FP countable projects and ‘hybrids’

Impact Points - Pilot Findings

- IPs can be counted for non-FP countable projects with access to appropriate Subject Matter Experts (SMEs) and documentation
- Categories of non-FP countable projects are definable and will enable templates to be developed and reused
- Some projects (e.g. new product) will impact a large portion of the applications identified and will require time to count the first time. After that the template will allow for faster assessment.
- Some ‘hybrid’ projects did not fit the definition
 - Effort identified as ‘non-countable’ is actually related to the functional changes
 - Impacted functions that would have been counted as IPs were, in some cases, already included in the FP portion of the project

Impact Points Example – Concept

- New Product Plan
 - If the new plan requires new logic then it should be a FP countable project; however, if this just requires adding a new plan as a value to tables and or logic used by other plans it would not be
 - Impact Points would consider all of the functions impacted as though it was an entirely new plan with unique logic
 - The same data and transaction functions would be counted using the IFPUG rules and an Impact Point count could be determined
 - Example: All Order Entry transactions would be accessing this new plan and would be ‘impacted’ by the change. Each EI would be included.

Impact Point Example – New Prices for Existing Processes

Requirement:

- Add new prices to table – no structure change
- Use existing logic – test to make sure it works

Impact Description	Function Name	Function Type	DETs	FTRs
Impacted to assign new prices	CDR - Mobile Originating (roaming)	EI	>17	>2
Impacted to assign new prices	CDR - Mobile Terminating (roaming)	EI	>17	>2
Impacted to read new prices	Rating Information to Revenue Assurance	EO (calcs)	<20	1
Impacted to read new prices	Invoices	EO (calcs)	>20	>2
Impacted to read new prices	Data to Finance/Accounting	EO (calcs)	>20	>2
Impacted to read new prices	Price List ROA	EI	<16	1

Impact Point Example – New Format for File Feed

Requirements:

- Accept 3 new fields from external source due to format changes
- Fields are not recognized or used by the receiving application

Impact Description	Function Name	Function Type	DETs	FTRs
Impacted to accept new format of file feed from external source	Call Data Record - Voice	EI	>17	>2

Impact Point Example – Modifications to Web Pages

Requirements:

- Display new data elements on Customer Detail Screen
- Change Calculation on Order Summary Report
- Change order of fields on Customer Detail Display, Order Summary Report, Order Display, and Product Search

Impact Description	Function Name	Function Type	DETs	FTRs
	Customer Detail - Display	EQ	>20	>2
	Order Summary Report	EO (calcs)	>20	>2
	Order – Display	EQ	>20	>1
	Product Search	EQ	<20	1

Impact Point Example – Modifications to Web Pages

Requirements:

- Display new data elements on Customer Detail Screen
- Change Calculation on Order Summary Report
- Change order of fields on Customer Detail Display, Order Summary Report, Order Display, and Product Search

Impact Description	Function Name	Function Type	DETs	FTRs
Already counted for project – do not count again	Customer Detail - Display			
Already counted for project – do not count again	Order Summary Report			
Changed order of fields	Order – Display	EQ	>20	>1
Changed order of fields	Product Search	EQ	<20	1

Impact Points – Advantages

- One Measure for all non-FP countable projects
- Once an impacted function is identified, rules for ‘how’ to count are already available (IFPUG)
- Measure is not impacted by the development techniques or physically how things are implemented
- Can associate productivity rates for each appropriate segment (e.g. platform, type of change, size, etc.)
- Can develop IP templates for each type of non-FP countable project to reuse on future projects of the same type

Impact Points Implementation Considerations and Recommendations

- Completing a representative and accurate IP baseline study is essential
- IP counting guidelines need to be documented and communicated – specifically what projects qualify
- Additional data analysis is necessary to support IP productivity trend analyses and categorization
- IP templates must be developed to enable efficient IP counting

Impact Points Baseline Study

- Determine representative sample of non-FP countable projects based on type and volume of projects
- Validate the projects are non-FP countable
- Conduct IP counting sessions with knowledgeable SMEs to find all impacted functions
- Collect effort data and additional ‘attribute’ data
- Analyze data for trends in productivity and rationale for any variances
- Develop matrices for IP productivity based on appropriate categorization

Impact Points Template Creation

- Develop separate template for each category of change
- Document if template is usable 'as is' for each situation or must be customized (e.g. all CDRs or only some CDRs)
- If missed impacted functions are identified at a later date the template must be updated