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GROUP, INC.

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# What's Happening with Impact Points

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## What's Happening with Impact Points

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# **Presentation Objectives**

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- Definition and Use of Impact Points
- Categories and Guidelines of Impact Point Counts
- Industry Experience and Measurement

## Definition of Impact Points

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- Impact Points are a consistent, repeatable method for counting the functions impacted by the non-Function Point (FP) countable activities in development projects
- 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) by a project
- When counting a project, Impact Points do not duplicate functions counted using FPs

## Current Use of Impact Points

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- Q/P has multiple clients using Impact Points on a regular basis to measure the maintenance activities included in development projects
- Clients are also using Impact Points to measure and categorize pure maintenance activities in-lieu of establishing FP baselines
- When a project has both Impact Point and FP portions, the size and effort for each portion needs to be kept separate. If the effort cannot be separated, then the primary size measure is used.
- Data analysis is ongoing and trends in productivity by category are still being identified

## Impact Points – Categories

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- **Accessibility** – new ways to access the same functionality
- **Values** – tariff changes, rate changes, adding products and/or services, offers, vendors
- **Usability** – code/text changes, static page updates, cosmetic changes, format changes, defect correction, consolidate/separate screens
- **Performance Tuning** – efficiencies in caching, buffering, and data calls, process physical files in different orders, change to new technology, allow for larger volume

# Impact Points – Guidelines

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- Only count Impact Points if not related to FP functionality
- Only count user identifiable functions as described in Counting Practices Manual
- Use CPM identification, classification and sizing rules unless specifically mentioned in Impact Point guidelines

**Impact Point Guidelines will soon be available on the Q/P web site ([www.qpmsg.com](http://www.qpmsg.com))**

# Impact Points – Guidelines

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## ILFs/EIFs

- Count ILFs/EIFs impacted by database restructuring/new technology (e.g. Oracle to DB2)
- Count ILFs/EIFs impacted by database reformatting (e.g. move fields around, consolidate fields for efficiency, etc.)
- Count ILFs/EIFs impacted by DET type changes (e.g. numeric to alphanumeric)
- Count ILFs/EIFs impacted by DET length changes that are not business required
- Code tables added, changed, or deleted
- Add values to tables – if not related to FP portion



## Impact Points – Guidelines

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### EIs/EOs/EQs

- If a row is added to table, count functions, that are impacted by the change (e.g. new rate added – count the Order functions that will be accessing and using the new rate)
- Count EQs with 0 FTRs (static web pages)
- Count functions with formatting and/or text changes only
- Count functions impacted by performance changes
- Count functions maintaining and displaying code data
- Count functions impacted by parameter configuration changes unless changes resulted in processing logic changes that generated FPs

# Impact Points – Guidelines

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## EIs/EOs/EQs

- Count functions impacted by changes to text of error/confirmation messages
- Count Web pages with content changes
- Count functions developed in multiple languages (e.g. English, Spanish, etc.)
- Count multiple EOs/EQs when building multiple versions with different sorts
- Count functions impacted by value changes (e.g. calculation routing uses 10% instead of 20% or switch printer ID that report is being sent to)
- Count functions corrected due to implemented defects

## Impact Points – Advantages

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- One measure for all non-FP countable projects and allows for all projects to be measured
- 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 Impact Point templates for each type of non-FP countable project to reuse on future projects of the same type

## Impact Points – Potential Risks

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- Not 100% coverage
- Double counting of functions between Impact Points and FP
- Counting Impact Points on functions that should be considered in the effort of the development project covered by FPs (e.g. table updates that are required for the project functionality to meet user requirements)
- Not IFPUG compliant at this time
- Lack of knowledge of Impact Point process and rules – the Impact Points process is evolving
- Issues with template development – may not be able to develop templates for all situations and/or may take significant time (to be used for repetitive non-FP projects)
- Some ‘maintenance’ activities result in hundreds of functions being impacted

# Industry Impact Point Example

- Requirements:**
- Add values to acceptable inserts for statements
  - Allow larger number of inserts for statements

<b>Impact Description</b>	<b>Function Name</b>	<b>Function Type</b>	<b>DETs</b>	<b>FTRs</b>
Change to allow larger number of inserts on statements	Statement - Regular	EO	>20	>2
Change to allow larger number of inserts on statements	Statements - Rerun	EO	>20	>2

# Impact Points – Spreadsheet Example

Add Chg Del Conv	Maintenance Type (Use Drop Down)	Maintenance Description	Function Name	Function Type	DETs	RETs/FTRs
	Corrective	Bug fix to populate 'cents' field on bill				
	Perfective	Reduced calls to db and keep more data in core				
	Preventative	Allow for more volume for larger clients				
	Technical Adaptive	New xml version				
	Cosmetic	Changed labels on reports				

May adjust Maintenance Type verbiage based on specific client categories

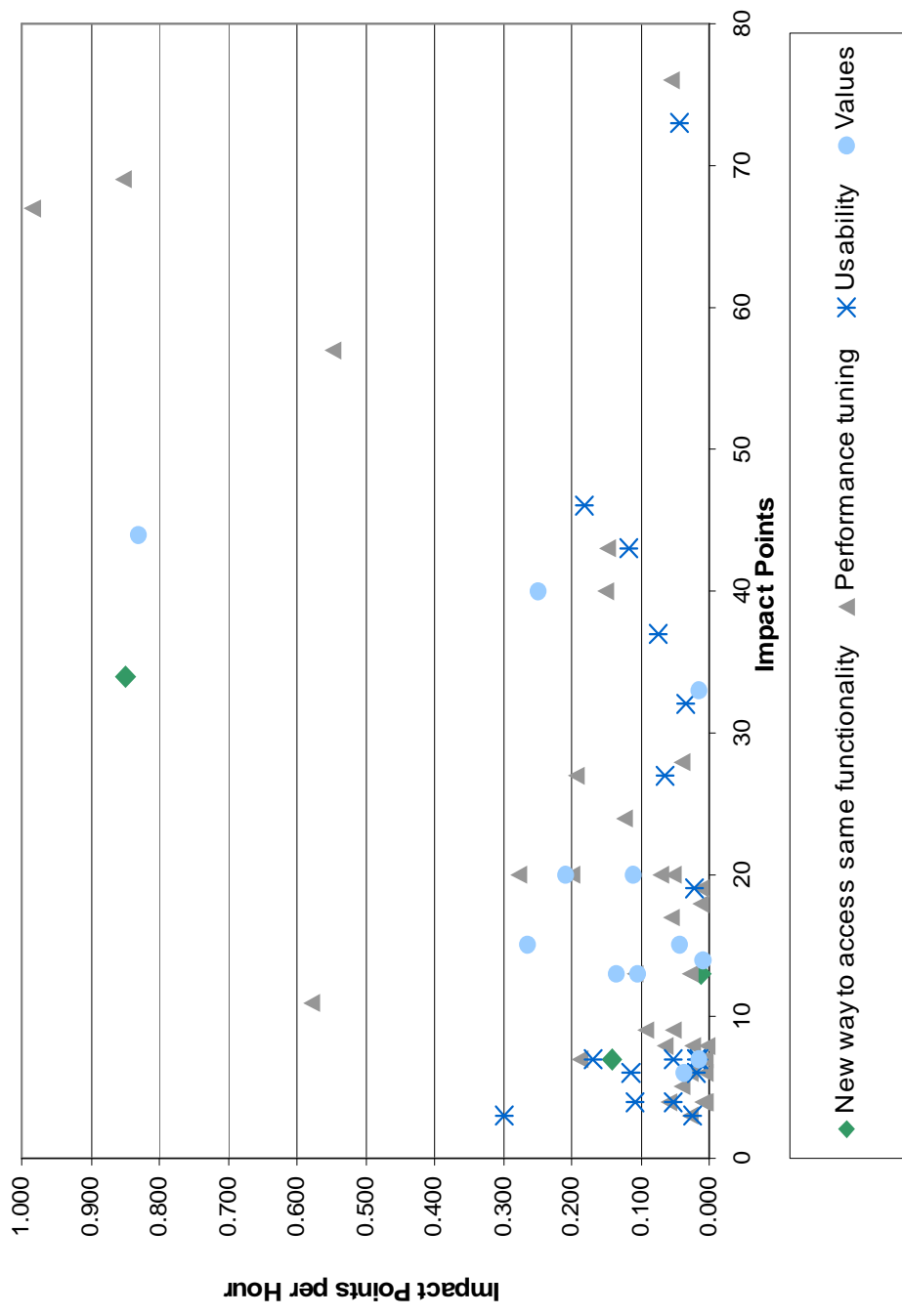
# Maintenance Definitions

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- **Corrective Maintenance** focuses on fixing defects. Defects refer to the system not performing as originally intended, or as specified in the requirements.
- **Perfective Maintenance** includes all efforts to improve the quality of this software. This includes improving response time, maintainability, reliability or other “non functional” changes.
- **Preventative Maintenance** includes activities relating to forecasting/anticipating issues or problems that can be resolved before they become a defect. For example, recognizing increased transaction rates and performing tuning activities prior to degradation in performance.
- **Technical Adaptive Maintenance** includes technically initiated changes such as changing a business application to conform to upgraded operating systems or upgrading or changing development tools. These maintenance activities are not the result of changing business requirement functionality.
- **Cosmetic Changes** at customer’s request include heading name changes, changes in values of hard coded lists, and format changes, which do not change processing logic.

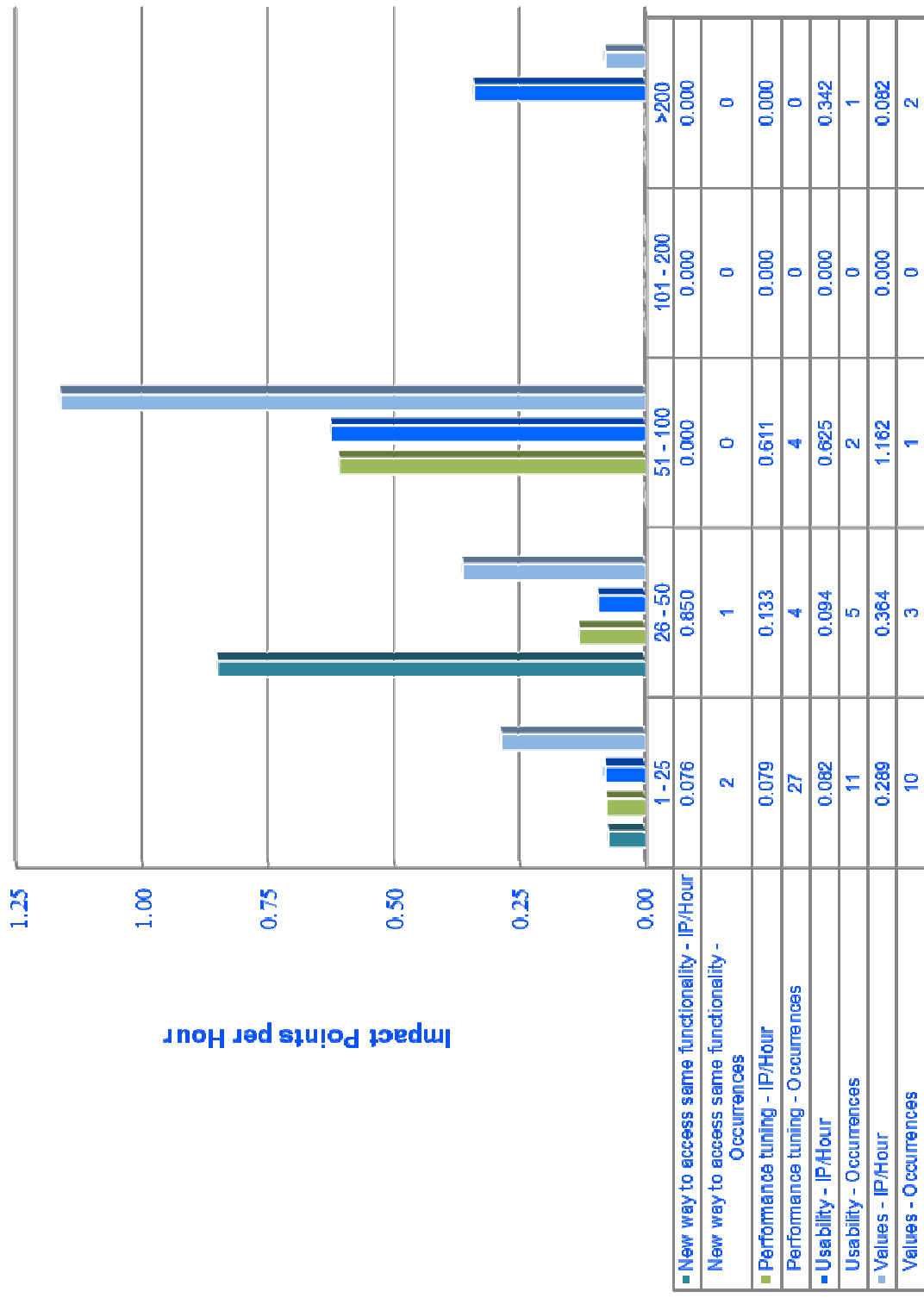
# Impact Point Productivity Increases with Size

**Note:** Projects with Productivity >1.0 IP/HR and Impact Points >80 are excluded from this Chart for readability





# Impact Point Productivity for Performance and Usability Appear to be Consistent



Project Size Group



## Summary

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- Impact Points are being used and are aiding organizations in quantifying all aspects of software development
- Productivity data is starting to become available allowing for trend analysis
- Guidelines are being developed and documented allowing for consistent and repetitive application of the Impact Point methodology
- Implementation has been relatively easy due to FP knowledge