

Practical orientation for the use of the IFPUG Measurement Spread Sheet

- 1) The sheet is divided in three parts: Measurement, Functions and Summary (see the figure below). Each tab contains specific fields that need to be filled out appropriately, according to the following description. Noticed that some cells are automatically filled (gray background) and should not be modified due to the fact that its value is derived by formulas that reference other cells.

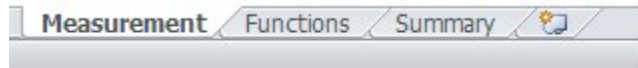



Figure 1 – Tabs

- 2) The first part refers to information about the measurement, such as artifacts and tools used, measurement purpose, or the type of measurement, etc. This is represented in the figure below.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC																												
1																																																								
2	Measurement Identification																																																							
3																																																								
4	Company															\$/FP	0,00	Cost	R\$	-																																				
5	Application															FP			-																																					
6	Project																																																							
7	Responsibile															Creation																																								
8	Peer Reviewed by:															Revision																																								
9	Look here for directions on how to use the Excel sheet.																																																							
10	Type of Measurement	Estimation																																																						
11		Development Project																																																						
12		Enhancement Project																																																						
13		Aplication (Baseline)																																																						
14																																																								
15																																																								
16	Measurement Purpose																																																							
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Summary	Functional Size (FP)		Impact	Local FP
	ADD	-	1,00	-
	CHG	-	0,50	-
	DEL	-	0,50	-
	-		-	

Figure 2 – Measurement Identification

The fields\$/FP, Impact factor and Local FP are used in applications where this sheet model is used for Systems Development and Enhancement Service Orders Measurements whose production measurement is done using Function Point Analysis. These are out of the scope of this document. It is proposed that this model be immersed in a context in which there´s a measurement quality guarantee and that that it possess fields for the registration of the Responsible individual for the measurement (same with the creation date) and fields for Peer Reviewer (same with the revision date). The Type of Measurement options are not exclusive: The first field, Estimation, is attributed to an estimation of final

measurement; meanwhile the rest of the fields are attributed to a Development Project, Enhancement Project or Application.

3) The second part contains the explanation of the measurement or the estimation. Here, the analyst should be able to find the information necessary to justify their measurements with the correct measurement. This is presented in Figure 3.


1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S					
2	 Function Point Measurement Excel Sheet - Version 2.0																							
3																								
4	Application :										Project :													
5	Responsible :										Peer Reviewed by :													
6	Company :										S/FP = 0					Cost = R\$ 0,00					FP = 0			
7	Function		Type	(A/M/D)	DET	RET/FTR	ctl	c	complexity	FP	Local FP	Observations												
8																								
9	Logical Files																							
10	City		ILF	A			ILFL	L	Low	7	7,00													
11	Client		ILF	A			ILFL	L	Low	7	7,00													
12	Bill		EIF	A			EIFL	L	Low	5	5,00													
13																								
14	bill																							
15	Bill - Add bill		EI	A			EIA	A	Average	4	4,00													
16	Bill - Modify bill		EI	A			EIA	A	Average	4	4,00													
17	Bill - Delete bill		EI	A			EIA	A	Average	4	4,00													
18																								
19																								
20																								
21																								
22																								
23																								
24																								

Figure 3 – Function Identification

-The Application, Project, Responsible, Peer Reviewer, Company and FP are filled out automatically.

-Elementary Process or Data Group: Fill out with the function name, whether it be a Data Type Functions of Transaction Type Functions;

Type: Represents the type of function. Fill out with the abbreviations below:

- External Input – EI
- External Output – EO
- External Inquiry – EQ
- Internal Logical File – ILF
- External Interface File – EIF

-(A/M/D/T): Is the form in which a determined function entered within the scope of the measurement. Fill out with the following abbreviations:

- Added Function – A: Consider this value for development projects or in the measurement of an application(s);
- Modified Functions – M: Can only be used in enhancement projects;
- Deleted Functions: - D: Can only be used in enhancement projects;
- Tested Functions – T: Relevant only when the NESMA Test Functions Points are used

-DET: Data Element Types: These are necessary to determine the transaction/data type complexity. Leave it blank to use the NESMA Estimation Measurement, where a data type function is considered to have a low complexity and transaction type function is considered to have a medium complexity. You should also not fill this field out if you want to use the NESMA Indicative Measurement where an ILF contributes with 35 FP and an EIF with 15 FP.

-Complexity: Calculated by the sheet according to the quantity of Data Element Types and Files Type Referenced, in accordance with Function type in the case of a detailed measurement or based on the type of function in the case of a NESMA Estimation Measurement. Assume the following values:

- Low
- Average
- High

-FP: Measurement Function Point Contribution of the respective function. This is also calculated by the spread sheet.

The Complexity column as well as the FP column is calculated in accordance with the following table.

Complexity														
Record Element Types (RET)	ILF and EIF				File Types Referenced (FTR)	EI				File Types Referenced (FTR)	EO and EQ			
	Data Element Type (DET)					Data Element Type (DET)					Data Element Type (DET)			
	<20	20-50	>50		<2	<5	5-15	>15		<2*	<6	6-19	>19	
1	Low	Low	Medium		Low	Low	Medium		Low	Low	Medium			
2-5	Low	Medium	High		Low	Medium	High		Low	Medium	High			
>5	Medium	High	High		Medium	High	High		Medium	High	High			

Contribution			
Functionality Type	Low	Medium	High
Internal Logical File (ILF)	x7	x10	x15
External Interface File (EIF)	x5	x7	x10
External Input (EI)	x3	x4	x6
External Output (EO)	x4	x5	x7
External Inquiry (EQ)	x3	x4	x6

Figure 4 – Complexity Table

-Local FP: Do not consider

-Observations: Use this space to document which inputs were used to identify the respective function. Which use case, which spread sheet, which report...something that allows for a proper and agile justification.

- 4) The third tab contains information in regards to the measurement or estimation summary, using the previous tabs as inputs.

FAIIO **Sumario de la Medición**

Application :		Project :		
Responsibile :		Peer Reviewed by :		
Company :		\$/FP = 0	Cost= R\$ 0,00	FP = 0
Function Type	Functional Complexity	Total by Complex.		%
EI	0 Low	x 3	0	
	3 Average	x 4	12	
	0 High	x 6	0	
Total	3	Total	12	38,7%
EO	0 Low	x 4	0	
	0 Average	x 5	0	
	0 High	x 7	0	
Total	0	Total	0	0,0%
EQ	0 Low	x 3	0	
	0 Average	x 4	0	
	0 High	x 6	0	
Total	0	Total	0	0,0%
ILF	2 Low	x 7	14	
	0 Average	x 10	0	
	0 High	x 15	0	
Total	2	Total	14	45,2%
EIF	1 Low	x 5	5	
	0 Average	x 7	0	
	0 High	x 10	0	
Total	1	Total	5	16,1%

% by Function Type

Figure 5 – Measurement Summary (1)

Figure 6 presents a summary of the functions by type and complexity. The pie chart below represents a function point percent distribution by type. You can also see the different function point counts by type of analysis such as Detailed Measurement, an Estimated Measurement and an Indicative Measurement.

Total FP (Detailed Measurement)	<u>31</u>
Total FP (Estimated Measurement)	<u>31</u>
Total FP (Indicative Measurement)	<u>85</u>

% by Function Type

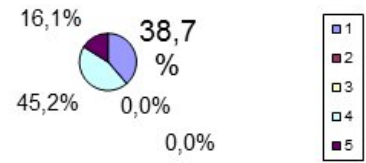


Figure 6 – Measurement Summary (2)

Go ahead and use the spread sheet to better familiarize yourself with it.