

SCOPE

Project Sizing Software™

# Mapping your Function Point Analysis Requirements to **SCOPE 5**

The following is a list of requirements compiled by Total Metrics from Function Point Counting Organisations who identified their needs for a software tool to make the management and maintenance of function point counts easy. Most of our clients expressed a particular a high requirement for reliability, accuracy, consistency, auditability and traceability and configuration control of their counts. We have identified the features and functions within **SCOPE** that addresses each requirement.

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
1.	Multi-lingual	We have counters based in sites world wide and each of them would like to work in their own language.	<p><b>SCOPE</b> is fully multi-lingual for all screens, messages and reports. Languages are:</p> <ul style="list-style-type: none"> <li>❖ English</li> <li>❖ Portuguese</li> <li>❖ German</li> <li>❖ Dutch</li> <li>❖ Spanish</li> <li>❖ Italian</li> <li>❖ Chinese</li> <li>❖ Korean</li> <li>❖ Japanese</li> <li>❖ French</li> </ul>
2.	Record Project Size	Need to be able to record size for individual Change Requests within a Project. – i.e. Allow multiple Change requests for one or many applications to be sized for the	<p><b>SCOPE</b> recognises that a Project is a business initiative that may impact one or more applications. Those applications may concurrently have more than one Project impacting them. So in any one Release of an Application <b>SCOPE</b> can record separately the 'impact' from one or many Projects. Project Impacts are recorded by assigning a Change Request (CR) for the Project to a Release.</p>

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		Project	<p>The Count Session for the CR records the impact of the Projects requirements on the application.</p> <p><b>SCOPE</b> has the capability to Report at Project Level and amalgamates the counts from many applications in the Project Reporting, to get an overall size and project metrics e.g. productivity rate, defect density, cost effectiveness etc.</p> <p><b>SCOPE</b> can also export all counts related to a project that can be updated by the counter, reviewed by the Project Manager and Users then imported back into the baseline counts of each application impacted.</p>
3.	Mapping Change Requests to Applications impacted as well as Projects	The tool should be able to display a list of Change Requests for each Application and identify the Project that 'owns' the Change Request	<b>SCOPE</b> provides a list that cross reference list of all Change Requests for each project and their relative sizes, plus the aggregated size for the Project.
4.	Mapping the Change Request User Requirements to the Transaction and Data Functions that are impacted by the Requirements	The tool shall be able to link each transaction and data function to one or more User Requirements. Each separate Change Request needs to be sized and be able to be separately reported	<p><b>SCOPE</b> enables the import of the User Requirements into a Notes List. Individual processes and data groups impacted by these Requirements can be mapped to the Requirement using the Notes Linking capability.</p> <p><b>SCOPE</b> enables selective online reporting identifying for each Change Request which Requirement impacts which processes and data groups and the functional size.</p> <p><b>SCOPE</b> will enable selective reporting so that the 'impact' of a particular requirement can be selectively and independently sized.</p>
5.	Import User Requirements and Application Impacts from external sources	The tool should allow for User requirements to be able to be imported from a flat file or directly from other tools (e.g. DOORS).	<p><b>SCOPE</b> can import Requirements as a Notes list if the Requirements tool can export a list that can be opened in Microsoft Excel.</p> <p><b>SCOPE</b> can also import the Notes List as an XML file via the <b>SCOPE</b> Schema.</p>
6.	Track any changes to Application functionality	The tool needs to allow different counters to make changes to a count and their changes tracked (who made what change, and	<p><b>SCOPE</b> provides complete traceability and auditability of its count results.</p> <p>❖ For every change to every node <b>SCOPE</b> records the user name and date and time it was created and or modified. This information can then be used as a search filter. I.e. Show all Processes, Data or</p>

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	<p>(process or data) or to Notes about the functionality or the Count decisions.</p>	<p>when) and any changes fully documented as notes.</p> <p>All comments also need to retain audit tracking information (who made what change when).</p> <p>Need to be able to retain a copy of the final version of the count at different milestones of the project (e.g. end of "design" and "closure etc.)</p> <p>Any changes need to be able to be searched i.e. Highlight all Processes and Data Groups that have changes made by a particular Counter or made within a particular date range.</p>	<p>Notes that have been changed by a selected User for a particular date range.</p> <ul style="list-style-type: none"> <li>❖ <b>SCOPE</b> allows you to copy or export archived Counts completed and approved at different project milestones so you have a complete history of the status of the Project Size.</li> <li>❖ <b>SCOPE</b> has the capability of commenting on reasons for counting decisions via the NOTES capability. It also allows detailed descriptions to be inserted in the description box of the Processes and Data Group nodes.</li> <li>❖ <b>SCOPE</b> Count Sessions record if a Count is Approved, who approved it and the date it was approved.</li> <li>❖ The Open Padlock on a Release for an application indicates that the Counts have not yet been applied to the Baseline to update the Production Version Baseline Count of the application</li> <li>❖ When all Counts for a Release of an application are approved, the Administrator then selects to update the Baseline count. And the Padlock is closed to indicate the Release is not Locked.</li> <li>❖ If the Administrator needs to 'hold back' a count from being applied to the baseline if it has not been approved, then <b>SCOPE</b> has a feature that allows a Count to be selectively held over and not applied to the baseline. <b>SCOPE</b> retains the 'held over' count to be applied when it is approved or when the baseline is next updated.</li> <li>❖ <b>SCOPE</b> provides an audit trail of all changes for any particular version of the software (i.e. a Software Release). The counter can view only their 'changes' or can view all changes to the Release from all other counters who have recorded Change Requests for that particular Release.</li> <li>❖ When a counter is making changes to a particular transaction (elementary process) or a File (Data Group) then <b>SCOPE</b> will show them a list of all the count sessions that have impacted that process or data group in that Release and the type of impact (add/ change/release).</li> <li>❖ To see changes for a particular Count Session the Counter just selects it from the List. To view all Changes by all Count Sessions for the Release of the software the Counter just selects "Flag – session impacted' and all the transactions and files that have been added/ changed or modified will highlight. If the counter highlights a particular transaction then <b>SCOPE</b> will show a list of all count sessions</li> </ul>

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			that have impacted that Transaction.
7.	Archiving and versioning	The tool should be able to archive all the baseline, development and enhancement counts in an accessible and easy to use file folder. Each count might have several releases. Counts should be saved using a standard naming convention showing the type of count, the release, impacted applications, etc.	<p><b>SCOPE</b> automatically applies versioning and archiving. It allows online hierarchical display of all the :</p> <ul style="list-style-type: none"> <li>❖ Projects and the count sessions that have been recorded for a project, and their size and the aggregated size for the project</li> <li>❖ Count Sessions may impact one or many Applications</li> <li>❖ All count sessions from all projects that impacted a Release of an Application</li> </ul> <p>These hierarchical lists are sequenced by the date the Project or Count was created so as to give a complete historical list of the sequence of events.</p> <p><b>SCOPE</b> keeps a complete history of every Project, Application, Release of an Application and the Counts that impacted the Release and the Projects associated with the Counts. It also keeps a complete history of the baseline sizes of each Application after each Release has gone into Production.</p>
8.	Retain all previous Counting Information for reuse in future counts	The tool needs to retain all counting information (process, name, type, complexity, linked files, notes etc.) and make it available for future counts to reuse this information.	<p><b>SCOPE</b> was designed to allow the User to base future counts on previous count results without overwriting any previous count results.</p> <p>To create a new Count for a projects Change Request for an application, the Counter just needs to select the current Work in Progress Release and set up a new Count Session for it. All the latest count details for that Release will be available to the counter whilst counting.</p>
9.	Keep 'snapshots' of Counts as history to reflect Project count status at different Project Milestones	The tool should manage the concept of project phase (in which the FPA is applied) and counts status at that Phase. Phases might include, for example: Technical Proposal, Feasibility Analysis, Functional Specification, and Delivery.	<p>Project Phases for the Count are recorded against the Count Session. Phase names are flexible and User can use whatever is appropriate for their organisation. Counts can have their status listed as Approved, with the data of Approval and who approved it.</p> <p>Note: If a user wants to 'snapshot' the status of any Count results at a particular project phase they can export a copy of the Release or copy it under "Other Releases" and annotate the Count Session Name with the Project milestone (E.g. CR054 – End of Design)</p> <p>The counts recorded under Work in Progress Release always reflect the latest Count status. It is these counts</p>

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			that are used to update the baseline at Project Completion.
10.	Count with different levels of Accuracy	<p>Tool needs to be able to record the size of each Process and Data Group with different levels of Accuracy.</p> <p>I.e. For very early counts should be able to just default complexity to 'average' or to just 'assess' complexity as 'Low', 'Average', or 'High'.</p> <p>The accuracy of the count should be reported with the details of the count.</p>	<p><b>SCOPE</b> has the ability to allow the counters to count at different 'levels' of accuracy. (i.e. estimated or measured) The complexity of each process and data group can be recorded in the count with increasing accuracy as follows:</p> <ul style="list-style-type: none"> <li>❖ Default – the counter just allowed the complexity to default to the industry accepted median value for this function type</li> <li>❖ Assessment – just guessed to be Low, average or high, not actually measured</li> <li>❖ Range – uses IFPUG standard Ranges</li> <li>❖ Enter Values - Count may know exact number of DETS or RETS and enter the values and <b>SCOPE</b> works out the complexity</li> <li>❖ Derived – <b>SCOPE</b> counts the number of FTRs, RETS, DETS linked to the function and derives its complexity automatically</li> </ul> <p>For auditability, <b>SCOPE</b> highlights both on the screen and in the details reports the details of 'how' the complexity was counted.</p> <p><b>SCOPE</b> allows the User to set their own options so that they can count quickly so all functions will be 'defaulted' or 'assessed' etc.</p>
11.	Keep history of the size of all Applications and Projects over time.	The tool should keep a complete history of all project, application and count data	<b>SCOPE</b> automatically keeps on ongoing history of all Projects Applications and counts. It Models them hierarchically and lists them sequentially in the order in which they were first recorded to provide an archive and audit trail of all counts.
12.	Should be able to set up a customised set of Properties	Tool should allow to set several statuses for transactions (and also for ILF/EIF records) i.e. when both FP counters (CLIENT and for e.g.	<b>SCOPE</b> has a fully customisable capability to set the status, priority, etc. of any process or data group using its Category /Attribute capability. I.e. The User would set up a template Category called "Function Approval Status" and attributes called :

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	<p>(attributes / key words) that can be assigned to Transactions and Data.</p>	<p>SUPPLIER ones) agree that transaction is "OK" and more changes will be done/are required then they can "flag" the transaction with status "Transaction agreed". This will mean that they do not need to pay attention to this transaction anymore and they can focus on the rest of the transactions.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>❖ not counted – zero FP points</li> <li>❖ not counted – transaction is not countable (different than the previous status)</li> <li>❖ transaction agreed</li> </ul> <p>List of "statuses" should be configurable because of the needs and habits of each Site.</p> <p>Nice to have: each status could have assigned some colour for better visual recognition within list of transactions.</p>	<ul style="list-style-type: none"> <li>❖ "Function not Reviewed"</li> <li>❖ "Function Reviewed but not Agreed"</li> <li>❖ "Function Agreed".</li> </ul> <p>Another Category could be "Function Included" and attributes called:</p> <ul style="list-style-type: none"> <li>❖ Not Counted (zero FPs)</li> <li>❖ Not Countable</li> </ul> <p>Counters would assign the appropriate attribute to the functions at time of counting/review. <b>SCOPE</b> allows filtering on a single attribute or combinations. So that functions in dispute can be easily reported along with their notes as to why they are in dispute.</p> <p>Note: <b>SCOPE</b> highlights online in 'blue' any function that has had its function points set to 'zero' so that users are fully aware that it will not contribute to the FP total size. The 'zero' function points highlights in Red in the reports for any function that has been set to a zero count.</p> <p><b>SCOPE</b> has the ability to assign a note to any Function set to be "not counted" to explain why the decision was made.</p>
13.	FP count estimation	For the first FP estimation, application should support functionality to provide RET/FTR and DET value range dropdown list	<b>SCOPE</b> allows the user to select the IFPUG ranges for DETS, FTRs and RETs as required.

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		<p>boxes and based on the selected values properly count FPs.</p> <p>For example, it will support possibility to choose range 2 to 5 RETs for ILF/EIF and 3 different ranges for DETs (1-19, 20-50 and 51 or more)</p>	
14.	Repository of ILF/EIF	<p>The tool should support creating and using of ILF/EIF's repository i.e. list of ILFs/EIFs that were already used/defined within previous projects that can be successfully used within further projects.</p> <p>This will allow FP counters :</p> <p>a) either to pick appropriate ILF/EIF name from already defined ILF/EIF names (if it is suitable for a project)</p> <p>b) or to create new ILF/EIF which will be stored in the ILF/EIF repository</p> <p>ILF/EIF already stored within the repository should have several attributes/flags about the creation of the ILF/EIF:</p> <ol style="list-style-type: none"> <li>1) name of the Logical File</li> <li>2) type of the Logical File (ILF or EIF)</li> <li>3) boundary where ILF/EIF belongs</li> </ol>	<p><b>SCOPE</b> 'copies' down all Data Groups from previous counts for an Application Boundary from previous count sessions. All associated information about the Data Groups within the Application Boundary is also copied down. I.e. All its attributes, complexity, type, description, name as well as any attributes assigned or Notes linked to it.</p> <p><b>SCOPE</b> allows for the recording of all the attributes described in this requirement, that is:</p> <ul style="list-style-type: none"> <li>❖ All Nodes on all <b>SCOPE</b> trees (including data nodes) are assigned a create/modify date and person name.</li> <li>❖ All Nodes (transaction and data) will be able to select which Applications they interface with (i.e. share data) from the master List of Applications. For ILFs and EIFs this is the list of Applications that access the Data Group</li> </ul> <p><b>SCOPE</b> is unique in function point counting tools in that it also allows the Data Groups to be modelled hierarchically e.g. ILFs and EIFs can be stored in Data Folders which can group 'like' files. E.g. All Accounts Files, Customer Related Files.</p> <p><b>SCOPE</b> also allows :</p> <p>Each Data Group to be further decomposed to identify exactly each RET and each DET that resides in each RET.</p> <ul style="list-style-type: none"> <li>❖ Each DET, RET, ILF or EIF can also be cross-referenced to the physical file that they represent in the actual application. This is particularly useful for traceability, auditability and when identifying</li> </ul>



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		<p>-&gt; here it must be possible to either choose a boundary from the "boundary repository" or the possibility to enter a new boundary (appropriate action flow can be specified)</p> <p>4) creator of the ILF/EIF (name(s), company (CLIENT , ADM PARTNER, ... ) )</p> <p>note1: name(s) should be able to pick from FP counters name repository</p> <p>note2: company name should be able to pick from company repository</p> <p>5) date when the ILF/EIF was created (or changed ... but in this case there must also exist versioning system i.e. history of data such as: when was ILF/EIF changed, who provided change and why it was changed)</p> <p>6) number of DETs</p> <p>7) number of RETs</p> <p>8) complexity</p> <p>9) note -&gt; additional notes related to ILF/EIF</p> <p>10) project name i.e. what project firstly specified this ILF/EIF</p>	<p>impacted files in Change Requests.</p> <ul style="list-style-type: none"> <li>❖ Project name that first specified the ILF or EIF can be stored in the description field for the ILF or alternatively as a linked note.</li> <li>❖ Audit control of all Nodes such that date of creation / Modification and Name of the Counter are recorded on the Node.</li> </ul>
15.	FP counters repository	Application should be able to create repository of FP counters who are involved in FP counting for the Site for e.g. for CLIENT site it should	<b>SCOPE</b> allows recording of Customisable information in its CATEGORY – Attributes feature. I.e. Set up a Category called COUNTERS. Underneath set up a Categories for each Site. Then the counters and their details can be listed under each Site. This enables any process, note or data group to be linked to the counter

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		<p>contain:</p> <ol style="list-style-type: none"> <li>1) list of FP counters from CLIENT</li> <li>2) list of FP counters from ADM SUPPLIER who are involved in FP counting for CLIENT</li> </ol> <p>Aim:</p> <p>To be able (easily) find out who was involved in FP count/creation of ILF/EIF, ... + easily find contact information</p> <p>Each name (personal record) should have contain several attributes:</p> <ol style="list-style-type: none"> <li>1) name / surname</li> <li>2) contact data (email, telephone number)</li> <li>3) company</li> <li>4) note -&gt; additional information if necessary</li> </ol>	<p>that created it or has modified it.</p>
16.	Enhancement and Development counts for applications	The tool should allow the ability to manage counts for each application boundary impacted by the project under analysis at the same time without the need to close one and open another.	<p><b>SCOPE</b> allows you to work within the same database but does require the opening and closing particular counts.</p> <p>However if a counter wanted to work on multiple count sessions from multiple application boundaries at the same time <b>SCOPE</b> does allow you to 'snapshot' a count so that it can be accessed at the same time as the currently open counts and viewed in a tiled window and updated by 'swapping' between the tiled windows. When the counter has finished they just select to 'import' the count session back into the central database.</p>
17.	Function Standard Attributes	For each transaction and data function the tool shall be able to store the following standard attributes:	<p>All these attributes are stored in <b>SCOPE</b> as attributes of Processes (transactions) or Data Groups (Files)</p> <p><b>SCOPE</b> has a unique capability in that it also allows the counter to record the actual names of RETs and DETS belonging to ILFs and EIFs and allows the counter to link Transactions that access these DETs and RETs and FTRs. It also allows the counter to indicate if the transaction reads or updates the DETs or FTRs.</p>

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		<ul style="list-style-type: none"> <li>❖ ID code;</li> <li>❖ Name;</li> <li>❖ Operation type (ADD, CHGA, CHGB, CFP, DEL);</li> <li>❖ Element type (EI, EO, EQ, ILF, EIF);</li> <li>❖ DETs' name and number;</li> <li>❖ FTR / RETs' name and number;</li> <li>❖ complexity;</li> <li>❖ Notes.</li> </ul>	<p><b>SCOPE</b> will automatically count the number of DETs accessed and store the number or the User can input it.</p> <p><b>SCOPE</b> can automatically derive the number of DETS and RETs for an ILF /EIF and store the number or the User can input the number</p>
18.	Function complexity - Range of values	<p>The user shall be able to input a range of possible complexity values for each function (i.e. minimum, most probable, and maximum). This is necessary in order to manage FP estimations and not only FP counts.</p>	<p><b>SCOPE</b> allows for counts at different levels of accuracy. <b>SCOPE</b> records the accuracy of counting and includes it in all reports for the transaction or data group. <b>SCOPE</b> allows recording of complexity by allowing the user to either:</p> <ul style="list-style-type: none"> <li>❖ Just 'default' the complexity</li> <li>❖ Assess it roughly i.e. L , A or H</li> <li>❖ Assign a range</li> <li>❖ Enter exact values</li> </ul>
19.	Function Additional Attributes	<p>The user shall be able to add details to functions through the use of free text fields.</p>	<p><b>SCOPE</b> allows the user to input information in the Description of any function or assign one or many notes to any function.</p>

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20.	Projects' total FP count	The tool should produce an overall project FP count, which should include counts of all the applications impacted by the projects.	<b>SCOPE</b> will total for a Project all the sizes for its associated Count Sessions that are linked to one or many applications. If Effort is recorded in the Project Details <b>SCOPE</b> will also report the PDR based on the aggregated size across all count sessions.
21.	View FP decomposition model	It shall be possible to: <ul style="list-style-type: none"> <li>❖ View count structure</li> <li>❖ Delete components and descriptions</li> <li>❖ Update components and descriptions</li> <li>❖ Add components and descriptions</li> </ul>	<b>SCOPE</b> allows the counter to hierarchically functionally model not just the Transactions (Processes) but also the Data Groups.  All Functional Groups, Processes, Data Groups, RETS, DETs have names and description fields that can be maintained.
22.	Maintain Transactions	It shall be possible to: <ul style="list-style-type: none"> <li>❖ Add and define transactions EI(L,A,H), EO(L,A,H), EQ(L,A,H)</li> <li>❖ Add and define transactions EI(L,A,H), EO(L,A,H), EQ(L,A,H)</li> <li>❖ View/select transaction details</li> <li>❖ Delete transaction function details</li> </ul>	<b>SCOPE</b> has all this functionality in its function and data trees

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23.	Maintain group of transactions	It shall be possible to: <ul style="list-style-type: none"> <li>❖ Add and define transaction group</li> <li>❖ Update transaction group functions</li> <li>❖ View/select transaction group details</li> <li>❖ Delete transaction group functions</li> </ul>	<b>SCOPE</b> allows Processes (transactions) to be grouped under Functional Groups. These can be maintained as described.
24.	Maintain transaction complexity	The tool shall be able to: <ul style="list-style-type: none"> <li>❖ Link transaction to ILFs/EIF's or DETS</li> <li>❖ Update link of transaction to ILFs/EIF's or DETS</li> <li>❖ Delete link of transaction to ILFs/EIF's or DETS</li> <li>❖ View link of transaction to ILFs/EIF's or DETS</li> </ul>	<b>SCOPE</b> can record both RETs and DETs under ILFs and EIFs and allow transactions to link to FTRs, RETs and DETs.  <b>SCOPE</b> also allows the User to record DETS that cross the boundary but are NOT stored on ILFs or EIFs and link these to transactions.  <b>SCOPE</b> allows viewing automatically of all linked Transactions and FTRs, RETs and DETS
25.	Maintain ILFs & EIFs	It shall be possible to: <ul style="list-style-type: none"> <li>❖ Add and define ILFs/EIF's ILF(L,A,H), EIF(L,A,H)</li> <li>❖ Update ILFs/EIF's and details ILF(L,A,H),</li> </ul>	<b>SCOPE</b> provides all the required functionality in the Function and Data Trees.

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		EIF(L,A,H) <ul style="list-style-type: none"> <li>❖ View/select ILF/EIF details</li> <li>❖ Delete ILF/EIF details</li> </ul>	
26.	Maintain RET details	It shall be possible to: <ul style="list-style-type: none"> <li>❖ Add and define RET details</li> <li>❖ Update RET details</li> <li>❖ View/select RET details</li> <li>❖ Delete RET details</li> </ul>	<b>SCOPE</b> allows the modelling of Data Groups in that it allows the User to Group them into Folders. Within each folder the ILFs/EIFs can then be decomposed into their RETs which can be maintained and within each RET decomposed further into DETs which can be maintained.
27.	Maintain DET details	It shall be possible to: <ul style="list-style-type: none"> <li>❖ Add and define DET details</li> <li>❖ Update DET details</li> <li>❖ View/select DET details</li> <li>❖ Delete DET details</li> </ul>	<b>SCOPE</b> allows the modelling of Data Groups in that it allows the User to Group them into Folders. Within each folder the ILFs/EIFs can then be decomposed into their RETs which can be maintained and within each RET decomposed further into DETs which can be maintained.
28.	Linking to Physical objects	The tool shall be able to manage links to physical objects e.g. DETS to physical objects such as tables, file layouts; Projects/work packages to project documentation: <ul style="list-style-type: none"> <li>❖ Add link</li> </ul>	<b>SCOPE</b> allows for easy linking of all its Data and Function, Attribute and Notes Trees. Therefore any Physical Object can be set up as either an Attribute or a Note. (E.g. One click to Import the list from Excel).  The User can then link one or more Physical Objects (e.g. Use Cases, Physical Files, Screens, Tutorials, Function Owners) to the processes or data groups on the functional models.  All links can be maintained and viewed

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		<ul style="list-style-type: none"> <li>❖ Update link</li> <li>❖ delete link</li> <li>❖ View link</li> </ul>	
29.	Maintain data complexity	<p>It shall be possible to link ILF/EIF to transactions:</p> <ul style="list-style-type: none"> <li>❖ Add link</li> <li>❖ Update link</li> <li>❖ Delete link</li> <li>❖ View links</li> </ul>	<p><b>SCOPE</b> does all linking to all levels of Data Groups with a single click, without needing to open additional screens. One click for when the transaction READS the Data Group (shows red tick) and click twice (shows Blue tick) for when the Transaction UPDATES the data group.</p> <p><b>SCOPE</b> can link as READ ONLY or UPDATE not just to Data Groups but also to RETs and DETS. Access types are automatically upwardly inherited.</p>
30.	Count status	<p>It shall be possible to maintain the status of a count:</p> <ul style="list-style-type: none"> <li>❖ Update date count started</li> <li>❖ View status (Not Started, In progress, On hold, Complete)</li> <li>❖ Update status</li> <li>❖ Add status progress and hold up comments</li> <li>❖ View progress/time elapse details</li> <li>❖ Update date count</li> </ul>	<p>The Details for a count Session :</p> <ul style="list-style-type: none"> <li>❖ <i>Date Count Started</i> (shows if it has started or not started)</li> <li>❖ <i>Date Count Completed</i> (shows count has completed)</li> <li>❖ <i>Date Count Approved</i> (shows count is approved to be included in the baseline update)</li> <li>❖ <i>Approved by</i> - Name of person who validated and approved the count</li> </ul> <p>Progress and Time elapsed can be determined from the time between the two dates.</p> <ul style="list-style-type: none"> <li>❖ <i>Count Hours</i> allow recording of the time spent on the count</li> <li>❖ <i>Optional Notes</i> is the field used to record organisation specific data e.g. Reasons why the count has been held up.</li> </ul> <p><b>SCOPE</b> has numerous documentation text fields to record any comments on the count e.g. <i>Count Purpose</i>,</p>

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		completed	<i>Count Description, Count Background.</i>
31.	Additional count data	<p>The tool shall be able to manage additional count data:</p> <ul style="list-style-type: none"> <li>❖ Client analyst</li> <li>❖ Joint count Y/N</li> <li>❖ Analyst</li> <li>❖ % accuracy of count</li> <li>❖ Issues</li> <li>❖ Notes</li> </ul>	<p><b>SCOPE</b> has fields to record counter information:</p> <ul style="list-style-type: none"> <li>❖ <i>Counters Names</i> - can list names of the counters ( e.g. could put ADM Supplier Analysts here )</li> <li>❖ <i>Applications Experts Name</i> can list names of the business representative counters here ( e.g. could put CLIENT Analysts here )</li> <li>❖ <i>CFPS</i> - enables recording of whether the count was completed by an IFPUG accredited counter</li> <li>❖ <i>Count Level</i> – records the level of accuracy of the count. (E.g. See Total Metrics paper : Levels of Counting in Appendix)</li> </ul> <p><b>SCOPE</b> has numerous documentation text fields to record any comments on the count e.g. <i>Count Purpose, Count Description, Count Background</i> and <i>Optional Notes</i>.</p>
32.	Adding new functionalities	<p>When inserting a function in a count the system should propose a list of the available functions for the application under analysis (retrieving them from the baseline count of the application). The user should be able to select a function from the list or to insert a new function. The application baseline should then be updated with changed and new functions.</p>	<p><b>SCOPE</b> allows the User to create a copy of the Baseline count (under Work in Progress Release) and record project impacts (add/change/delete) to the baseline <i>processes</i> and <i>Data Groups</i> in a <i>Count Session</i>.</p> <p>When the <i>Release</i> is complete then all approved <i>Count Sessions</i> can be applied to update the baseline. When the user selects to 'update the baseline' then this applies the net effect of all projects that impacted the Baseline. If at the time of update a <i>Count Session</i> has not been approved then the Use can select to 'hold it over' and it will be retained but will not update the baseline. <b>SCOPE</b> will then 'reapply' the held over <i>Count Session</i> to the new baseline ready for the <i>Count Session</i> to be approved at a later date.</p> <p>If a <i>Count Session</i> is not approved or it is decided not to progress the project then it can be deleted from the Work in Progress Release by selecting Delete Count and all its impacts recorded on the Data and Process will be 'removed'.</p>
33.	FTRs' evaluation	<p>The tool shall be able to manage information regarding FTRs For each function it should be possible to insert a specific number of FTRs, a closed or an open range.</p>	<p><b>SCOPE</b> allows for very high level of detail to be recorded about FTRs. The User can select how much detail depending on what is known at the time of counting.</p> <p><b>SCOPE</b> allows for a user when inserting a function to choose the number of FTRs at 4 different levels of</p>



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		<p>It should also be possible to insert the list of FTRs' names. When inserting FTRs the system should suggest the list of available ILFs of the application under analysis.</p>	<p>accuracy. From</p> <ul style="list-style-type: none"> <li>❖ 'Default' to industry medians</li> <li>❖ A guess (assessment)</li> <li>❖ Selecting a range</li> <li>❖ Recording the exact number,</li> <li>❖ Actually linking and deriving the number from what is linked.</li> </ul> <p><b>SCOPE</b> lists the FTRs hierarchically and allows related FTRs to be grouped into File Folders for easily find them. It will allow the User to sort them ascending/descending order.</p>
34.	ILF/EIFs' update from new FTR s	The tool should make an automatic update of the application baseline with new ILF and EIF when the user refers to FTRs which are not already present.	<b>SCOPE</b> automatically updates the Application baseline with any new referenced files identified during a Count Session.
35.	DETs' evaluation	<p>The tool shall be able to manage information regarding DETs. For each function it should be possible to insert a specific number of DETs, a closed or an open range. It should also be possible to insert the list of DETs' names.</p> <p>For transaction functions:</p> <ul style="list-style-type: none"> <li>- it should be possible to insert DETs which are not linked to logical files.</li> <li>- If DETs are related to logical files (FTRs) the system should show the list from which the user can select</li> </ul>	<p><b>SCOPE</b> allows the User to record names of DETS and how a particular process uses the DET i.e... Reads or Updates. It also allows the DET to be identified as Added/Changed/Deleted during a Count Session. This gives greater traceability and auditability of counts. If an ILF /EIF is marked as being Changed. The Counter can actually document which DETs were added, changed, deleted on the ILF. When the Baseline is updated the 'deleted' DETs are removed. However the Count session will retain the History of what occurred, when by what project.</p> <p><b>SCOPE</b> will allow you to enter DETs under a File Folder that are not linked to Logical Files and do not get counted in the Logical File Count. We use this feature to record the 'transient' DETS that cross the boundary (e.g. Totals, messages, control data) that is counted by the Elementary process but is never stored on a Logical Data Group.</p> <p><b>SCOPE</b> shows the List of DETs under the ILF or if they belong to a RET then it shows them under the RET.</p>

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		them.	The user can then select to link them.
36.	Complexity's evaluation	<p>The tool shall be able to define the complexity:</p> <ul style="list-style-type: none"> <li>❖ -High</li> <li>❖ -Medium</li> <li>❖ Low</li> </ul> <p>The tool should also be able to suggest the complexity based on the DETs or FTRs' number.</p>	<p><b>SCOPE</b> allows for 5 different levels of accuracy when recording complexity of both Data Groups and Transactions. However it is fully IFPUG compliant and IFPUG do not have a 'weighting' for 'Medium/High' therefore <b>SCOPE</b> does not allow this feature as it could not calculate FPs in an IFPUG compliant way.</p> <p><b>SCOPE</b> can automatically derive the complexity of:</p> <ul style="list-style-type: none"> <li>❖ A Process by calculating the number of FTRs and the number of DETs that are linked to the process.</li> <li>❖ An ILF or EIF from the number of RETs and DETs that are listed under the ILF or EIF</li> </ul>
37.	Enter a new External Interface File	It should be possible to enter a new EIF. The tool might allow to select the EIF among a list of ILF filtered on some criteria (i.e. the name of an application)	<b>SCOPE</b> allows the User to enter a new EIF for an application. If the EIF already exists as an ILF in another Application then <b>SCOPE</b> allows the User to select and copy it into this Application as an EIF. The User can then remove any DETs Not used by processes within the Application boundary to ensure the EIF is counted correctly for this Application.
38.	Total FP per system	The tool shall be able to produce a count for a single application	<p><b>SCOPE</b> displays online a list of Counts for Each Application, its history of Baseline counts and the Count size of each Release and for each Count Session impacting the Release for an Application (See Application List)</p> <p><b>SCOPE</b> has numerous reports that the user can select for an application to reports its counts. I.e. Application Baseline, Release Baseline, Count Session, Release Reworked (cumulative impact of all Count sessions) and Release Impact (Net result of applying all Count Sessions)</p>
39.	Filtering functionalities	The user should be able to filter visualised functions based on several criteria.	<p><b>SCOPE</b> allows a fully customised way of assigning <i>Attributes to Processes, Data groups and Notes</i>. All these 4 objects can be cross-linked and filters applied to selectively count and list them on reports.</p> <p><b>SCOPE</b> allows you to store the results (Flag Sets) to be redisplayed at a later date. It also allows you to store the Filters applied (Filter Sets) to be re-applied at a later Date. These Filters can be combined such that you can select "<i>all processes that access the Customer File, that have been marked as high Priority and specified under Use Case Customer</i>" <b>SCOPE</b> will then only select the Processes that satisfy this complex filter,</p>

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			it will highlight them with flags and selectively count them and report them.
40.	Assigning counts	It shall be possible to assign and un-assign projects/work packages to FP analysts	<b>SCOPE</b> allows for <i>Count Sessions</i> to be assigned/ unassigned to FP Analysts. <i>Count Sessions</i> in turn can be assigned/unassigned to a <i>Project</i> .
41.	FP Counts	<p>The tool shall be able to produce a count for:</p> <ul style="list-style-type: none"> <li>❖ a work package</li> <li>❖ a project</li> <li>❖ an application boundary</li> </ul>	<p><b>SCOPE</b> allows for all three to be separately reported as a functional size. I.e.</p> <ul style="list-style-type: none"> <li>❖ For individual work packages, it reports Count Session Size</li> <li>❖ for Project Size it aggregates all the Count Session Sizes over all Applications impacted by the Project to report a Project Size</li> <li>❖ For an Application it groups all the count Sessions within its boundary under a Release to report the Release Size for the Application.</li> </ul>
42.	Importing of historical count information	The tool shall support the importing of historical count data from the currently used Excel data sheets.	<p><b>SCOPE</b> has full import capability from Microsoft Excel from the <b>SCOPE</b> Excel template.</p> <p>To automate the import from an organisations own Excel Data Sheet Format, we usually work with the client to develop a series of Excel Macros that enable the transformation of client's data into the <b>SCOPE</b> Excel format to occur in two or three key strokes. Then it is just a matter of saving and Importing the count into <b>SCOPE</b> by selecting a menu option.</p> <p><b>SCOPE</b> imports Processes, Data Groups (all ILF, EIFs, RETs, and DETs), NOTE SETS, and NOTES.</p>
43.	Importing of FP data	<p>The tool shall support the ability to import from an external source the following:</p> <ul style="list-style-type: none"> <li>❖ Functions</li> <li>❖ DETs</li> <li>❖ RETS</li> </ul>	<p><b>SCOPE</b> imports all of these from either an Excel Spreadsheet or from other vendor's tools e.g. Function Point Workbench.</p> <p><b>SCOPE</b> can import all of the elements stored in FPW along with all the links seamlessly into its own database format.</p>

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		<ul style="list-style-type: none"> <li>❖ FTRS</li> <li>❖ ILF</li> <li>❖ EIF</li> </ul>	
44.	Populating a Baseline count	The tool will populate the baseline count session recording the new updated counts in a coherent way respect to former baseline versions.	<p><b>SCOPE</b> has intelligence to update the Baseline Count Session with multiple Count Sessions that have impacted the current Release.</p> <p>It adds new processes and data groups (including RETS, DETs) and changes existing ones and deletes anything that is marked as deleted.</p> <p><b>SCOPE</b> also allows the User Flexibility during the Update. I.e. They can select not to update the baseline with a count session that has been identified as Conversion Functionality. It will stay in the Release Count and in the Project but not be used to update the Baseline.</p> <p>The user can also select not to Update the Baseline with a particular count that is currently in dispute, project has not been completed or the User has not decided to proceed. The strength with <b>SCOPE</b> is that it allows these counts to be retained as the Baseline is updated and they stay current with any changes applied to the baseline until such a time that the User decides to update the Baseline with the Count. If the User finally decides that the Count is not going to go ahead they can just select to Delete it and the Baseline Integrity is maintained.</p>
45.	Baseline Count Attributes	Baseline count should include at least: <ul style="list-style-type: none"> <li>❖ - Function Id;</li> <li>❖ Function name;</li> <li>❖ Element type</li> <li>❖ DETs names and number;</li> <li>❖ RET / FTRs names and</li> </ul>	<b>SCOPE</b> retains all of this information in an audit trail a complete history of all impacts on any process or data group.

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		number; <ul style="list-style-type: none"> <li>❖ Complexity</li> <li>❖ FP (MIN, PROB, MAX);</li> <li>❖ Physical objects;</li> <li>❖ Notes;</li> <li>❖ For each function, the id and impacts of projects that introduced or enhanced it</li> </ul>	
46.	Baseline count additional information	The baseline count should include as additional information the list of projects and related phases that brought to the present baseline content.	<p><b>SCOPE</b> retains all of this information in an audit trail a complete history of all impacts on any process or data group.</p> <p><b>SCOPE</b> retains a list of all Count Sessions and all Projects that impacted those count Sessions. As well as each Baseline Count over the history of the Application.</p>
47.	Entering cover information in a Baseline count	Each new baseline count will consider a subset of attributes: <ul style="list-style-type: none"> <li>❖ Application's name;</li> <li>❖ Application manager's name;</li> <li>❖ Business Analyst' name</li> <li>❖ Software platform details</li> </ul>	<p><b>SCOPE</b> records all the following for an Application</p> <ul style="list-style-type: none"> <li>❖ Name</li> <li>❖ Description (Application Managers Name and Business Analysts Name could be included here)</li> <li>❖ Interfacing Details</li> <li>❖ Origin</li> <li>❖ Tech Detail</li> <li>❖ Year First Implemented</li> </ul>

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			<ul style="list-style-type: none"> <li>❖ Primary Language</li> <li>❖ Primary Language Level</li> <li>❖ Number Of Concurrent Users</li> <li>❖ Number Business Unit Users</li> <li>❖ Number Locations Installed</li> <li>❖ Platform</li> <li>❖ Application Type</li> </ul>
48.	Functionalities and mapping out with baseline counts	The tool will associate the single functionality (baseline's item) to the originating source (Stage Gate's name) and details about its phase.	<b>SCOPE</b> can associate any Process or Data Group with the Originating Source using either the Attribute capability or the Notes capability
49.	VAF Functions	It shall be possible to: <ul style="list-style-type: none"> <li>❖ View current VAF details and notes</li> <li>❖ Add VAF details and notes</li> <li>❖ Update VAF details and notes</li> <li>❖ Delete VAF details and notes</li> </ul>	<b>SCOPE</b> stores and fully maintains all information about the Value Adjustment factor and all its 14 GSCs. If the VAF is not used then it defaults it to 1.0 as per IFPUG Guidelines.
50.	Function point modelling	The tool should be able to produce the graphical representation of an application (application model) using its baseline. The best	<b>SCOPE</b> produces a graphical functional decomposition of all its objects types i.e... Functions and Processes, Data Groups, Notes and Attributes. It is displayed in a Microsoft Explorer type format. The User has complete control over which branches are expanded, or collapsed.

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		distribution of functions symbols on the page should be left to the user.	
51.	Graphical modelling and final output	The system should be able to graphically show functions for the project.	<b>SCOPE</b> produces a graphical functional decomposition of all processes, data groups, RETs and DETs impacted by the project. Impacts are highlighted with Colour (new nodes are <b>Green</b> , Changed nodes are <b>Orange</b> , and Deleted Nodes are <b>Grey</b> . To clearly demonstrate the impact of the project. The user can display and highlight all project impacted nodes by selecting to <i>"Flag All Session Impacted"</i>
52.	FP model and baseline count	The tool shall update the baseline count based on changes the users might make on the application model.	Baseline Count is automatically updated with the net effect of all concurrent Projects currently counted as impacting it.
53.	Function Point Model report	The tool should have reporting and printing functionalities specific for application models as defined in FPD54	<b>SCOPE</b> reports the Hierarchical Model both online and as hardcopy reports as a Tree and all function point counting information is displayed on the Tree. It does this for BOTH the Function/Process Tree and the Data Tree.  <b>SCOPE</b> aggregates the count values at each functional group.
54.	Project modelling	The tool shall be able to produce the graphical representation of an application (application model) using project count data.	<b>SCOPE</b> produces a graphical functional decomposition of all processes, data groups, RETs and DETs impacted by the project. Impacts are highlighted with Colour (new nodes are <b>Green</b> , Changed nodes are <b>Orange</b> , and Deleted Nodes are <b>Grey</b> . To clearly demonstrate the impact of the project. The user can display and highlight all project impacted nodes by selecting to <i>"Flag All Session Impacted"</i>
55.	Count Reporting	The tool should be able to produce reports on enhancement and development counts for each impacted application.	<b>SCOPE</b> produces very detailed and summary reports on each of these types of Counts.  It lists each elementary process and each Logical data Group, its name, position on model, its type, and complexity (provides detail on the level of accuracy of how complexity was derived), any multipliers applied, the number of FPs assigned.  The summary reports aggregate by type of impact type of function, complexity to attain a total.
56.	Baseline Reporting	The tool should produce reports including all the information about	<b>SCOPE</b> has more than 37 different type of Reports which report all aspects of the Baseline Counts

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		baseline counts.	
57.	Ex-post analysis	It should be possible to make all sort of after counting analysis (i.e.: number of FP per application, number of FP per project, etc.)	<p>In the <i>Applications List</i>, <b>SCOPE</b> reports online the Baseline counts of each application over its history, the size of each Release as an aggregate of all its count Sessions. The counts are listed with the names in a hierarchical list. (The Applications Portfolio count also reports similar information and is available in printed form.)</p> <p>In the <i>Projects List</i> <b>SCOPE</b> reports online the all the Count Sessions for a Project and the total Project Size (where the Count Sessions may be for many applications). (The Project Details Report also reports similar information and is available in printed form.)</p>
58.	Export to Microsoft Excel and other formats	The tool should be able to export in a conventional file format (Microsoft Excel, Microsoft Word, HTML) data and reports.	<p><b>SCOPE</b> can export all its reports into :</p> <ul style="list-style-type: none"> <li>❖ Microsoft Word</li> <li>❖ HTML</li> <li>❖ Microsoft Excel</li> <li>❖ PDF (which can then email)</li> </ul> <p><b>SCOPE</b> can export all its data from all its tables into an XML file which has a publicly available Schema.</p> <p>This has been specifically developed so that organisations can export all their Metrics data about their counts and import it into a central metrics repository.</p> <p><b>SCOPE</b> can export a summary of its Function Point Count into a CSV file for import into SPR KnowledgePLAN®</p>
59.	Customised report	A report wizard should be present in order to allow the user to make customised reports.	<p><b>SCOPE</b> allows the User to customise the content of the reports by providing the following features:</p> <ul style="list-style-type: none"> <li>❖ Report only those functions currently displayed on the trees</li> <li>❖ Report only those functions currently 'flagged' but a filter or manually flagged</li> </ul>



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			<ul style="list-style-type: none"> <li>❖ Report only those functions that are located on the currently selected Tree branch</li> <li>❖ It also allows the user to annotate the Report using the Customisable Report Description Feature.</li> </ul> <p><b>SCOPE</b> has an open database structure that enables you to develop your own customised reports from any reporting engine that can read via ODBC.</p>
60.	Metrics Reporting and Benchmarking – Ability to Interface with other systems	The tool should be able to interface other external systems for benchmarking purposes. The exact benchmarking tool to be used is not known currently but the system should support the ability to export data for these purposes.	<p><b>SCOPE</b> has export capability to export all the attributes of the Applications, Releases, Projects, Count Sessions in an XML file specifically designed for import into an organisations Metrics Repository</p> <p><b>SCOPE</b> has the ability to record all the ISBSG data that is mandatory for Project Reporting and Application Support and Maintenance Reporting in the ISBSG database. <b>SCOPE</b> also allows recording of all ISBSG Effort and Defect data at Release, Project and Count Session Level for internal Productivity and Quality reporting and also external benchmarking with ISBSG.</p>
61.	Filtering Counts	<p>The tool should allow count selection based on:</p> <ul style="list-style-type: none"> <li>❖ Project code;</li> <li>❖ Application name.</li> </ul>	<b>SCOPE</b> allows the User to select from an online Hierarchical List.
62.	Project Reporting	Reporting on project counts should be possible and should include all functionalities of all applications impacted by the project and within the FPA <b>SCOPE</b> .	<b>SCOPE</b> identifies all the Count Sessions impacted by the project and will then provide reports on all the transactions and all the data groups impacted by the Projects Count sessions. The project report lists all the counts for the different applications and aggregates them, into a single Project size. If effort and cost data has been entered it also reports the hrs/fp and the \$/fp/
63.	Delivery rate	The tool should be able to calculate a delivery rate for each application, starting from FP measures and Effort measures.	<b>SCOPE</b> can calculate the delivery rate of each Project (providing that the Effort data is entered for the Project). If Projects are for a single application then it will report the delivery rate by Application. The Project Delivery Rate (PDR) is reported both Online on the Project List and also in Hard Copy on the Project Details Report.
64.	Boundary	The tool shall be able to produce	<b>SCOPE</b> groups functionality within Application Boundaries so can report for each Application Boundary all

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	reporting	reports relating to the Applications: <ul style="list-style-type: none"> <li>❖ Applications impacted by a project or work package with count component details (ILF, EIF, EO,EI,EQ)</li> <li>❖ Projects impacting an Application and the relative size</li> </ul>	the required information.  It will report the sizes of all Application Boundaries impacted by the Project in the Project Details Report and also the contribution of each and also each Work Package.  Domain Size is reported online and also in the <i>Application Portfolio Report</i> – provides table of the Applications size after each Release.
65.	Project size reporting	The tool shall be able to report of project size data: <ul style="list-style-type: none"> <li>❖ UFPs, AFPs, Functions (EI,EO,EQ) added, changed, deleted, Data (ILF, EIF) added, changed deleted, VAF</li> <li>❖ % accuracy data - analyst, elapsed time, documentation, stage (estimate, design, closure)</li> <li>❖ Project size by platform type and New/Enhancement</li> <li>❖ Projects by type (Non hybrid, Hybrid)</li> <li>❖ Project hierarchy count data: Project and its</li> </ul>	<b>SCOPE</b> has over 40 different reports that report <i>all</i> the required information.  However, you can connect any reporting engine that reads ODBC databases.

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
		associated work packages	
66.	Project tracking reporting	<p>The tool shall be able to produce reports relating to project tracking:</p> <ul style="list-style-type: none"> <li>❖ List of project status (status, FP analyst, start date, completion date)</li> <li>❖ Count elapsed time (take account of hold-ups reported by analyst)</li> <li>❖ Project/count comments, issues</li> </ul>	<p><b>SCOPE</b> reports this information in the:</p> <ul style="list-style-type: none"> <li>❖ Project Details Report</li> <li>❖ Count Session Details Report</li> </ul>
67.	Log in and authentication	The tool will be accessible after authentication. (User ID and password)	Total Metrics has found that our clients own security and installation procedures provide the level of security necessary to control access to <b>SCOPE</b> .
68.	Automated input	<p>It shall be possible to:</p> <ul style="list-style-type: none"> <li>❖ Import and convert any existing FP counts from other formats/tools</li> <li>❖ Import a large amount of structure data, components, transactions, notes and links in one or many chunks</li> <li>❖ Import IFL/EIF and DET information</li> </ul>	<p><b>SCOPE</b> imports all Transactions and Application Functional Groups within an Application Boundary from Excel.</p> <p><b>SCOPE</b> can import all ILF, EIF, RET and DET information within an Application Boundary from an Excel.</p> <p><b>SCOPE</b> can imports all data to load its Function, Data, Notes and Attributes trees within an Application boundary from the <b>SCOPE</b> Microsoft Excel Template.</p> <p><b>SCOPE</b> imports <u>ALL</u> data and all relationships stored in the Function Point WORKBENCH™ Versions 3 onwards to the current version of FPW.</p> <p><b>SCOPE</b> does not import VAF information from an Excel spreadsheet but it does allow import and export of VAF information from other <b>SCOPE</b> counts. (This import from Excel sheets can be implemented if required by the Client).</p>

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		<ul style="list-style-type: none"> <li>❖ Import Application boundary information</li> <li>❖ Import VAF information</li> <li>❖ Import of project/work package information</li> <li>❖ Import of associations between projects, work packages, application boundaries, count data</li> </ul>	<p><b>SCOPE</b> does not import relationships between projects, work packages etc. from Microsoft Excel. (This import from Excel sheets can be implemented if required by the client).</p>
69.	Security Admin functions	It shall be possible to restrict user access type to Read only	<p><b>SCOPE</b> Professional relies on NTFS permissions to implement read-only access to <b>SCOPE</b> .data. <b>SCOPE</b> Enterprise when used with SQL Server can be configured with some users as read-only users.</p>
70.	Application Boundary repository	<p>Application should contain list of application boundaries which is valid for Site (basically it is list that was already set during Baselineing). Application should allow to pick desired application boundary (from the mentioned list) during FP count &amp; to assign this boundary into FP count</p> <p>Each application boundary (within Application boundary repository) should also store its list of "physical systems &amp; applications" that belong to application boundary.</p>	<p><b>SCOPE</b> allows the User to maintain a List of Logical Applications Boundaries and within each of these enables the User to store a list of the Physical Systems.</p> <p><b>SCOPE</b> allows the User assign one or more Application Boundaries to the Project and the FP Count for the Project.</p> <p><b>SCOPE</b> allows the User record the 'physical Systems" within the Application boundary. Thus enabling to share their Logical Data Groups and retain the integrity of relationships between transactions and data.</p>
71.	General System Characteristics (GSCs)	Application should be able to manage GSC repository (for Site) that was set during Baselineing or	<p><b>SCOPE</b> allows the User maintain the GSCs for the Application Boundary. It retains an audit trail to the changes to GSCs by Projects over time and enables the counter to record notes associated with the GSCs.</p>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
	repository	<p>it's updated during other projects.</p> <p>This repository should be accessible during FP count of a project + there will be possibility to connect to this repository and use desired GSCs values which are impacted within a project.</p>	<p><b>SCOPE</b> stores the GSCs with the latest version of the Application Boundary. Its audit trail enables the correct calculation of all the IFPUG Project Sizes i.e. VAF Before and VAF After.</p> <p>Note: in alignment with IFPUG 4.3 <b>SCOPE</b> reports counts primarily as unadjusted values. The summary reports will include the unadjusted and adjusted count values. When the VAF has not been used, it is defaulted to a value of 1.0</p>
72.	Application boundary attributes	<p>It should be possible to define application boundary attributes</p> <ul style="list-style-type: none"> <li>❖ Application boundary name</li> <li>❖ Description</li> <li>❖ Version</li> <li>❖ Domain</li> <li>❖ Associated systems</li> </ul>	<p><b>SCOPE</b> allows you to record all this information about an Application Boundary plus many more: e.g.</p> <ul style="list-style-type: none"> <li>❖ Description</li> <li>❖ Interfacing Details</li> <li>❖ Origin</li> <li>❖ Tech Detail</li> <li>❖ Year First Implemented</li> <li>❖ Primary Language</li> <li>❖ Primary Language Level</li> <li>❖ Number Of Concurrent Users</li> <li>❖ Number Business Unit Users</li> <li>❖ Number Locations Installed</li> <li>❖ Platform</li> <li>❖ Application Type</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
	Manage application boundary data	<p>It shall be possible to manage application boundary data:</p> <ul style="list-style-type: none"> <li>❖ Add application boundary</li> <li>❖ Add associated systems to boundary</li> <li>❖ Update application boundary</li> <li>❖ Update associated systems</li> <li>❖ Set end date on application boundary version</li> <li>❖ View application boundary data</li> <li>❖ Define link to application boundary model</li> <li>❖ Update link to application boundary model</li> <li>❖ Delete link to application boundary model</li> </ul>	<p><b>SCOPE</b> allows to the User to record and maintain (add, modify, delete, list, report and view) all information about an Application Boundary and to add Associated Physical Systems.</p> <p><b>SCOPE</b> records Versions of its Applications Boundaries as 'Releases'. Releases record the Date the Release was Implemented i.e. End Date.</p> <p>The following fields are recorded for each Release of the Application Boundary</p> <ul style="list-style-type: none"> <li>❖ ID</li> <li>❖ Application Boundary ID</li> <li>❖ Type</li> <li>❖ Position</li> <li>❖ Boundary currently being updated?</li> <li>❖ Is this the Baseline Count for the Application Boundary?</li> <li>❖ Version of the Boundary Name</li> <li>❖ Date Application Boundary Baseline Implemented</li> <li>❖ Application Boundary Version Description</li> <li>❖ Date this version of Boundary Baseline Approved</li> <li>❖ VAF at the time of this Boundary Version</li> <li>❖ Previous VAF of previous Version</li> <li>❖ Baseline_UFP</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>❖ Impacted_UFP</li> <li>❖ Reworked_UFP</li> </ul> <p><b>SCOPE</b> has an Application Boundary Model that allows the user to store all Application Boundaries within the Model and add/remove them from the Model. They can also be imported and exported from the Model.</p>
73.	Associate boundaries to projects	<p>It shall be possible to associate a project/work package with its associated application boundary(s).</p> <ul style="list-style-type: none"> <li>❖ - Add association(s)</li> <li>❖ - Update association(s)</li> <li>❖ - Delete associations</li> <li>❖ - View associations</li> </ul>	<p><b>SCOPE</b> allows the User to do all of this for both a Project and a Work Package (Count Session in <b>SCOPE</b>).</p>
74.	Associate boundaries to counts	<p>It shall be possible to associate a count with its associated application boundary.</p> <ul style="list-style-type: none"> <li>❖ Add association.</li> <li>❖ Update association.</li> <li>❖ Delete association</li> <li>❖ View association</li> </ul>	<p><b>SCOPE</b> allows the User to do all of this for both a Project and a Work Package (Count Session in <b>SCOPE</b>).</p> <p>It allows multiple Projects and Work Packages to be assigned to one or more Application Boundaries and within any Application Boundary allows multiple Projects and Work Package to be associated.</p>
75.	Project input	<p>It shall be possible to define project attributes such as:</p>	<p><b>SCOPE</b> allows the User complete full descriptive details about a Project or Work Package. As follows:</p> <ul style="list-style-type: none"> <li>❖ Name</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
		<ul style="list-style-type: none"> <li>❖ Project/Work package</li> <li>❖ Name</li> <li>❖ Project code</li> <li>❖ ID</li> <li>❖ Description</li> </ul>	<ul style="list-style-type: none"> <li>❖ Description</li> <li>❖ Type</li> <li>❖ Name Project Manager</li> <li>❖ Start Date</li> <li>❖ End Date</li> <li>❖ Project Status at time of Count</li> <li>❖ Days In active</li> <li>❖ Total Effort Hours</li> <li>❖ Ave number Dev Team</li> <li>❖ Dev Team Exp Bus Area</li> <li>❖ Dev Team Exp Soft Development</li> <li>❖ Effort Includes Dev Team</li> <li>❖ Effort Includes Dev Support</li> <li>❖ Effort Includes Computer Ops</li> <li>❖ Effort Includes End Users</li> <li>❖ Effort Includes Planning</li> <li>❖ Effort hours Plan</li> </ul>



ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>❖ Effort hours Specify</li> <li>❖ Effort Hours Build</li> <li>❖ Effort Hours Test</li> <li>❖ Effort Hours Implement</li> <li>❖ Cost</li> <li>❖ Country Code Currency</li> <li>❖ Method Cost Calculated</li> <li>❖ Development Country</li> <li>❖ Operating System</li> <li>❖ Programming Language</li> <li>❖ E-Mail or Message Server</li> <li>❖ HTML or Web Server</li> <li>❖ Object/Component Server</li> <li>❖ Method Used Collect Effort</li> <li>❖ Percent Not Project Work</li> <li>❖ Method Calculate Effort</li> <li>❖ Unpaid Effort Included</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>❖ Quality Effort Data</li> <li>❖ Database</li> <li>❖ Operating System</li> <li>❖ Programming Language</li> <li>❖ E-Mail or Message Server</li> <li>❖ HTML or Web Server</li> <li>❖ Object/Component Server</li> </ul>
76.	Project management	<p>It shall be possible to manage project data:</p> <ul style="list-style-type: none"> <li>❖ Add project/work package data</li> <li>❖ Update project/work package data</li> <li>❖ View project/work package data</li> </ul>	<p><b>SCOPE</b> allows the user to fully maintain all the Project Data.</p> <p>The <b>SCOPE</b> User can Add, change, delete, view, list, report on all Project Data and Work Package Data.</p> <p>The Work Package data for the Project impact on a particular Application Boundary is recorded in <b>SCOPE</b> under Count Session:</p> <ul style="list-style-type: none"> <li>❖ Name</li> <li>❖ IFPUG FPA Version e.g. 4.3</li> <li>❖ Local Guidelines Version for FP Count</li> <li>❖ Date Count Started</li> <li>❖ Project Status at time of FP Count</li> <li>❖ Description</li> <li>❖ Purpose Of Count for Work Package</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>❖ Software Version of Application at time of Work Package</li> <li>❖ Documentation used to support the FP count</li> <li>❖ Count Background – free text</li> <li>❖ Name Counter</li> <li>❖ Counter Certified CFPS?</li> <li>❖ Application Experts Names</li> <li>❖ Count Level of Accuracy</li> <li>❖ Date Count Completed</li> <li>❖ Effort To Count</li> <li>❖ Date Count Approved</li> <li>❖ Person Approved</li> <li>❖ OptionalField1</li> <li>❖ UFP</li> <li>❖ AFP</li> </ul>
77.	Project breakdown	The tool shall be able to manage the association between work packages and projects i.e. One project code may have several work packages, counted and quoted for separately. It should be possible to report on the entire project or each	<b>SCOPE</b> tool can do all this. I.e. it can manage via a Project / Work Package Model the capability of associating Work Packages to Projects and maintaining and reporting on the association. It does it exactly as described in the CLIENT Requirement.

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
		work package. <ul style="list-style-type: none"> <li>❖ Associate work package to project</li> <li>❖ View project to work package associations</li> </ul>	
78.	User Profiling	The system should allow different user to use different sets of functions. It must be possible to introduce different user profiles.	The <b>SCOPE</b> User Serial number restricts users to performing certain functions e.g. <ul style="list-style-type: none"> <li>❖ Administrator –               <ul style="list-style-type: none"> <li>○ allows for import of Function Point WORKBENCH Versions 4 to 7 Files into <b>SCOPE</b></li> <li>○ manages central repository of all validated approved counts</li> </ul> </li> <li>❖ FP User               <ul style="list-style-type: none"> <li>○ All functionality pertaining to managing Project Counts within Application Boundaries</li> </ul> </li> <li>❖ Reviewer               <ul style="list-style-type: none"> <li>○ <b>SCOPE</b> Viewer™ is a free downloadable program from <a href="http://www.totalmetrics.com">www.totalmetrics.com</a> that enables the Review to have access to view all information about the latest Application Boundary Project Counts and Work Packages but they cannot change the results. Used for counters to get applications experts to review count <b>SCOPE</b>.</li> <li>○ Reviewer can run any report, online or printed</li> <li>○ Reviewer can export all count reports and results to Microsoft Word, Excel or HTML</li> <li>○ The reviewer cannot add, change or delete any Transaction or Data Group they can only annotate by :</li> </ul> </li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>▪ linking to particular Notes and changing contents of notes</li> <li>▪ editing the description of a Transaction or Data Group</li> <li>▪ linking to a Review Attribute that has previously been set up</li> </ul>
79.	Multi-User / Concurrent Access	The tool must allow concurrent access.	<p>❖ <b>SCOPE</b> recognises the need for Organisations to manage a central Repository of Counts concurrently. <b>SCOPE</b> Enterprise Edition enables multiple counters to access the same <b>SCOPE</b> repository at the same time. Whilst two people are not able to make changes to exactly the same <u>count</u> at the same time (this would be similar to allowing two people to be editing a Microsoft Word document simultaneously) it does allow the counters to change different counts on different releases.</p> <p>Many organisations find that there are times when they want their counters to work remotely or they do not all have access to a centralised repository. We have therefore designed a robust approach to managing the integrity of the counts for <b>SCOPE</b> when you have multiple counters at remote sites but still want to store and report on a central repository.</p>
80.	On-Line Help	The tool must provide a detailed on-line help facility that is context sensitive	<p><b>SCOPE</b> has very detailed online Help that provides context sensitive Help and also all the search capability of ROBOHelp. It also has a downloadable user manual that can be viewed online or printed.</p> <p><b>SCOPE</b> has online Tutorials for all the Key functions and features including</p> <ul style="list-style-type: none"> <li>❖ Software Applications Boundary List</li> <li>❖ Set Up a New Application Boundary</li> <li>❖ Set Up a New Release of an Application Boundary</li> <li>❖ Set Up a New Baseline Count for an Application Boundary</li> <li>❖ Set Up an Enhancement Project Count</li> <li>❖ Set Up Multiple Counts for Work Packages impacting on the Application Boundary</li> </ul>

ID	Functional Requirement for an FPA Tool	Users' Wish list for FPA Tool Functions	Description of How <b>SCOPE</b> Implements the Users' Requirements
			<ul style="list-style-type: none"> <li>❖ Import Export Application Boundary Counts</li> <li>❖ Building Hierarchical Trees to Model the Application Boundary</li> <li>❖ Counting An Elementary Process</li> <li>❖ Counting a Logical File</li> <li>❖ Import Counts for Work Packages from other Databases into an Application Boundary</li> <li>❖ Import Count data from Excel</li> <li>❖ Import and Export Trees or Parts of Trees</li> <li>❖ Filtering</li> <li>❖ Using Links as Search Criteria</li> </ul>

For more information about **SCOPE** and Total Metrics see:

<http://www.totalmetrics.com/function-point-software/SCOPE-project-sizing-software>