## Summary of ODS Graphics Functionality in SAS® 9.3

<table>
<thead>
<tr>
<th>Graphical Task</th>
<th>Audience</th>
<th>What do you use?</th>
<th>What should you learn?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create graphs in the context of statistical analyses</td>
<td>Statistical users</td>
<td>Statistical procedures in SAS/STAT®, SAS/ETS®, SAS/QC®, and Base SAS that support ODS Graphics</td>
<td>Graphs are created by default or with procedure options which are documented in the procedure chapters. Specify the ODS GRAPHICS ON statement for batch jobs.</td>
</tr>
<tr>
<td>Enhance specific graphs for a paper or presentation</td>
<td>Statistical and general SAS users</td>
<td>ODS Graphics Editor</td>
<td>How to request editable graphs, invoke the Editor, use point-and-click features; see the SAS ODS Graphics Editor: User’s Guide</td>
</tr>
<tr>
<td>Create stand alone graphs for data exploration or for customized displays</td>
<td>Statistical and general SAS users</td>
<td>SGPLOT, SGPANEL, SGSCATTER procedures</td>
<td>SG procedure syntax; see the SAS ODS Graphics: Procedures Guide</td>
</tr>
<tr>
<td>Change the overall consistent appearance of graphs and tables</td>
<td>Statistical and general SAS users</td>
<td>ODS styles</td>
<td>STYLE= option in ODS destination statement</td>
</tr>
<tr>
<td>Save and manage graphs for papers and presentations</td>
<td>Statistical and general SAS users</td>
<td>ODS GRAPHICS statement options, ODS destination options</td>
<td>How to specify size and resolution; how to name and access image files</td>
</tr>
<tr>
<td>Make persistent changes in graphs produced by statistical procedures (apply whenever you run your program)</td>
<td>Advanced SAS programmers</td>
<td>User-modifications of graph templates provided by SAS</td>
<td>Basic features of the Graph Template Language and PROC TEMPLATE; see the SAS Graph Template Language: Reference</td>
</tr>
<tr>
<td>Create a highly customized stand alone graph</td>
<td>Advanced SAS programmers</td>
<td>ODS Graphics Designer</td>
<td>GUI for creating graph templates</td>
</tr>
<tr>
<td>Create a highly customized stand alone graph</td>
<td>Advanced SAS programmers</td>
<td>User-written graph templates</td>
<td>Graph Template Language, PROC TEMPLATE, and PROC SGRENDER; see the SAS Graph Template Language: Reference and the SAS Graph Template Language: User’s Guide</td>
</tr>
</tbody>
</table>


SAS® and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.
Example: Survival Plot Created by PROC LIFETEST

```sas
ods html style=htmlblue;
ods graphics on;
proc lifetest data=grouped
    plots=survival(cb=hw test atrisk=0 to 1500 by 250);
    time Time*Cens(0);
strata Treatment;
by Site;
run;
```

Example: Scatter Plot Matrix Created by PROC SGCATTER

```sas
proc sgscatter data=IrisVirginica;
title 'Fisher Iris Data';
matrix petallength petalwidth sepallength /
    ellipse=(type=mean)
    diagonal=(histogram normal kernel);
run;
```

Example: Customized Fit Plot Created with Graph Template Language

```sas
proc template;
define statgraph block;
begingraph;
    entrytitle 'El Niño Cycle of Pressure Differences';
    layout overlay / xaxisopts=(offsetmin=0 offsetmax=0);
    blockplot x=month block=elnino /
        datatransparency=0.75 display=(fill outline);
    scatterplot y=pressure x=month;
    pbsplineplot y=pressure x=month;
endlayout;
endgraph;
end;
run;
proc sgrender data=enso template=block; run;
```