

DOFASCO



ArcelorMittal

Proc du Jour- GRADAR

GHSUG, May 9, 2014

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Topic – Comparisons using GRADAR

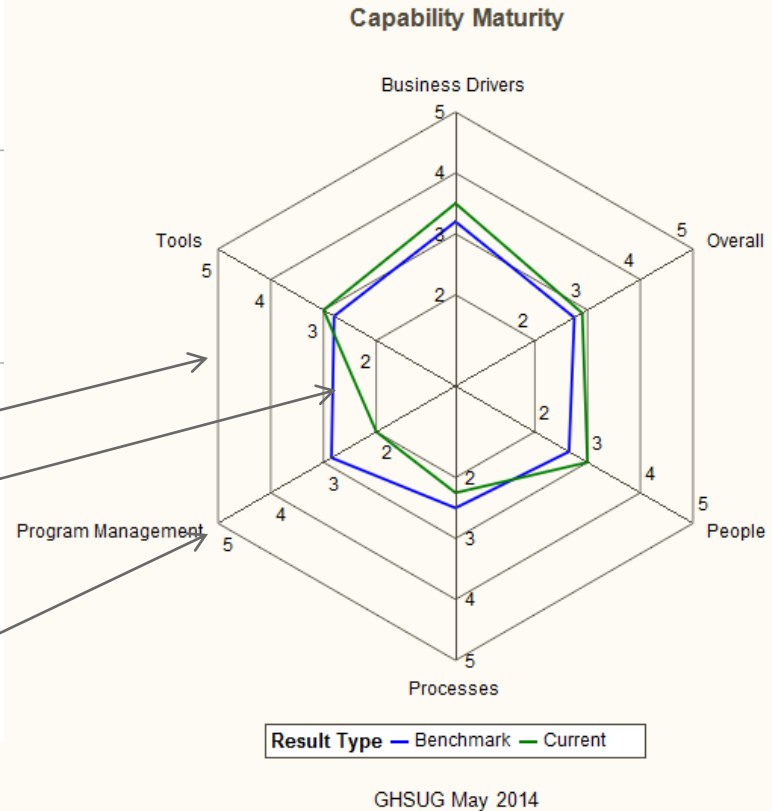


- The purpose of the radar (or spider) chart is to allow for multiple comparisons with different scales on a single graph.
- Can work well with surveys or comparisons to targets
- Should be used with caution- this chart is easy to misuse.
- The Enterprise Guide 4.3 version of this chart is very limited.

Visual comparisons are natural analytics.

Example: Capability Maturity Data Programming

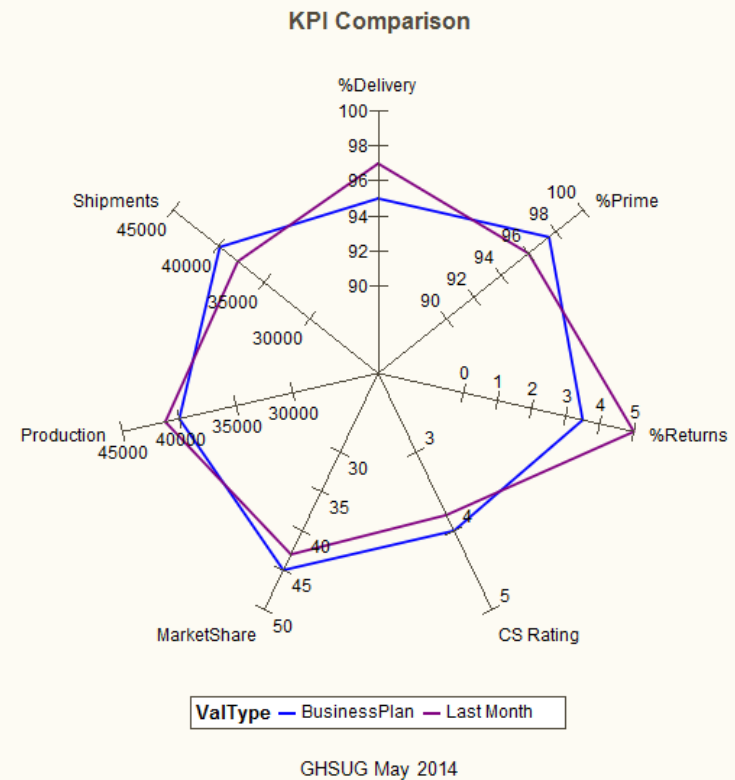
```
PROC SQL;  
    CREATE VIEW WORK.SORTTempTableSorted AS  
        SELECT T.Category, T.Measure, T.Result  
        FROM WORK.RADAR1 as T  
;  
QUIT;  
  
TITLE;  
TITLE1 "Capability Maturity";  
  
FOOTNOTE;  
FOOTNOTE1 "GHSUG May 2014";  
  
AXIS1 INTERVAL=EVEN ORDER=(2 to 5);  
  
PROC GRADAR DATA =WORK.SORTTempTableSorted  
;  
    CHART Category  
    /  
    OVERLAY= Result  
    SUMVAR=Measure  
    DES=' '  
    SPIDERWEB  
    CSTARS=(Blue, Green)  
    LSTARS= 1 1  
    WSTARS= 2 2  
    STARAXIS= (AXIS1, AXIS1, AXIS1, AXIS1, AXIS1, AXIS1,)  
;  
..
```



This chart compares current results to the benchmark in both a number of categories and an overall rating.

Example: KPI to Target (programmed)

```
TITLE;  
TITLE1 "KPI Comparison";  
  
FOOTNOTE;  
FOOTNOTE1 "GHSUG May 2014";  
  
AXIS12 Order=(90 to 100 by 2);  
AXIS3 Order=(0 to 5);  
AXIS4 Order=(3 to 5);  
AXIS5 Order=(30 to 50 by 5);  
AXIS67 Order=(30000 to 45000 by 5000 );  
  
PROC GRADAR DATA =WORK.SORTTempTableSorted  
;  
  CHART KPI  
  /  
  OVERLAY= ValType  
  SUMVAR=Value  
  STARTYPE=WEDGE  
  staraxis=(axis12,axis12,axis3,axis4,axis5,axis67,axis67)  
  CSTARS=(Blue, Purple)  
  LSTARS= 1 1  
  WSTARS= 2 2  
;  
/*
```

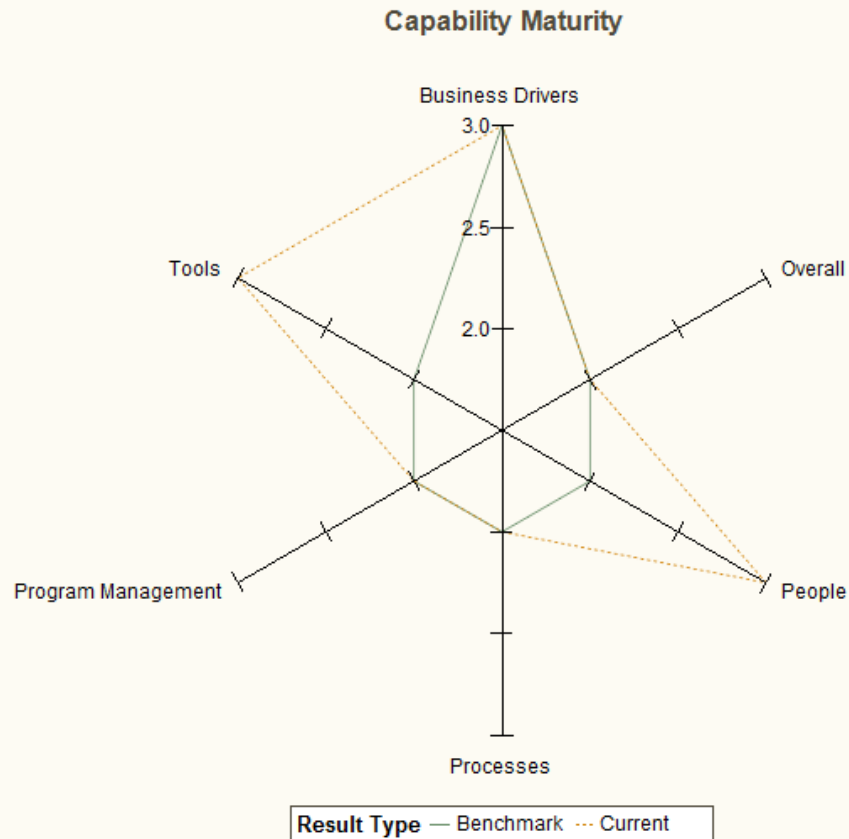
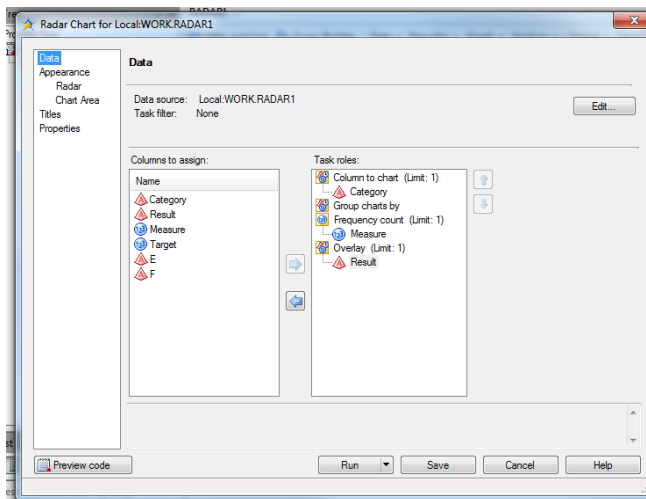


Allows multiple comparisons with different value scales within a single visual.

Example: Capability Maturity

Enterprise Guide Tasks / Graph / Radar Chart:

	Category	Result	Measure	Target	E
1	Overall	Current	2.9	5	
2	Business Drivers	Current	3.5	5	
3	People	Current	3	5	
4	Program Manag_	Current	2	5	
5	Processes	Current	2.25	5	
6	Tools	Current	3	5	
7	Overall	Benchmark	2.75	5	
8	Business Drivers	Benchmark	3.2	5	
9	People	Benchmark	2.65	5	
10	Program Manag_	Benchmark	2.85	5	
11	Processes	Benchmark	2.5	5	
12	Tools	Benchmark	2.8	5	



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Limited option control in EG 4.3- No axis control and no sumvar variable. The wedge view is the most readable, but only one axis is labeled and all are different.

Keep Radar Graphs Below the Radar - Far Below

Stephen Few

http://www.perceptualedge.com/articles/dmreview/radar_graphs.pdf

Chamber of Horrors

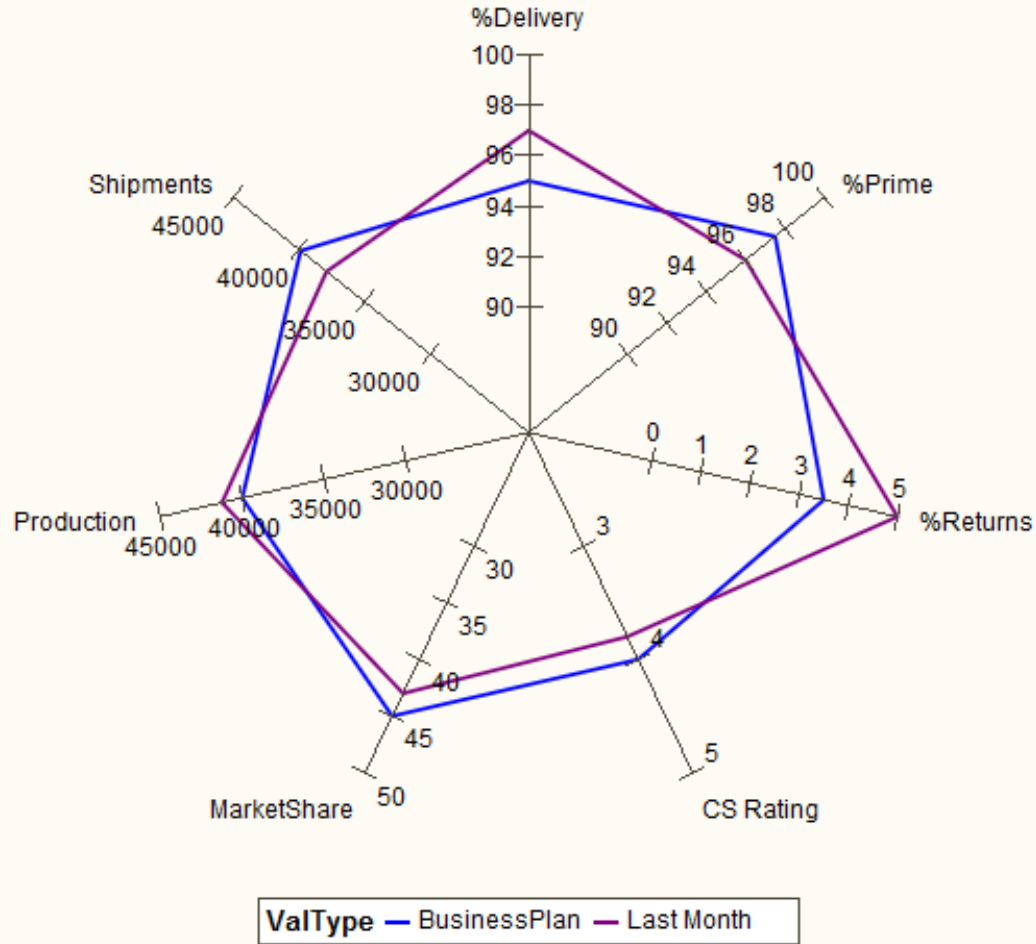
Rolph Hichert

<http://www.hichert.com/en/consulting/kommunikationsformen/75>

In addition to [circles](#) or pie wedges, torus shapes, and [rings](#), we are now increasingly coming across **spider charts**, also known as web charts, polar charts, or radar charts.

They are probably one of the least transparent and most unnecessary forms of visualization...

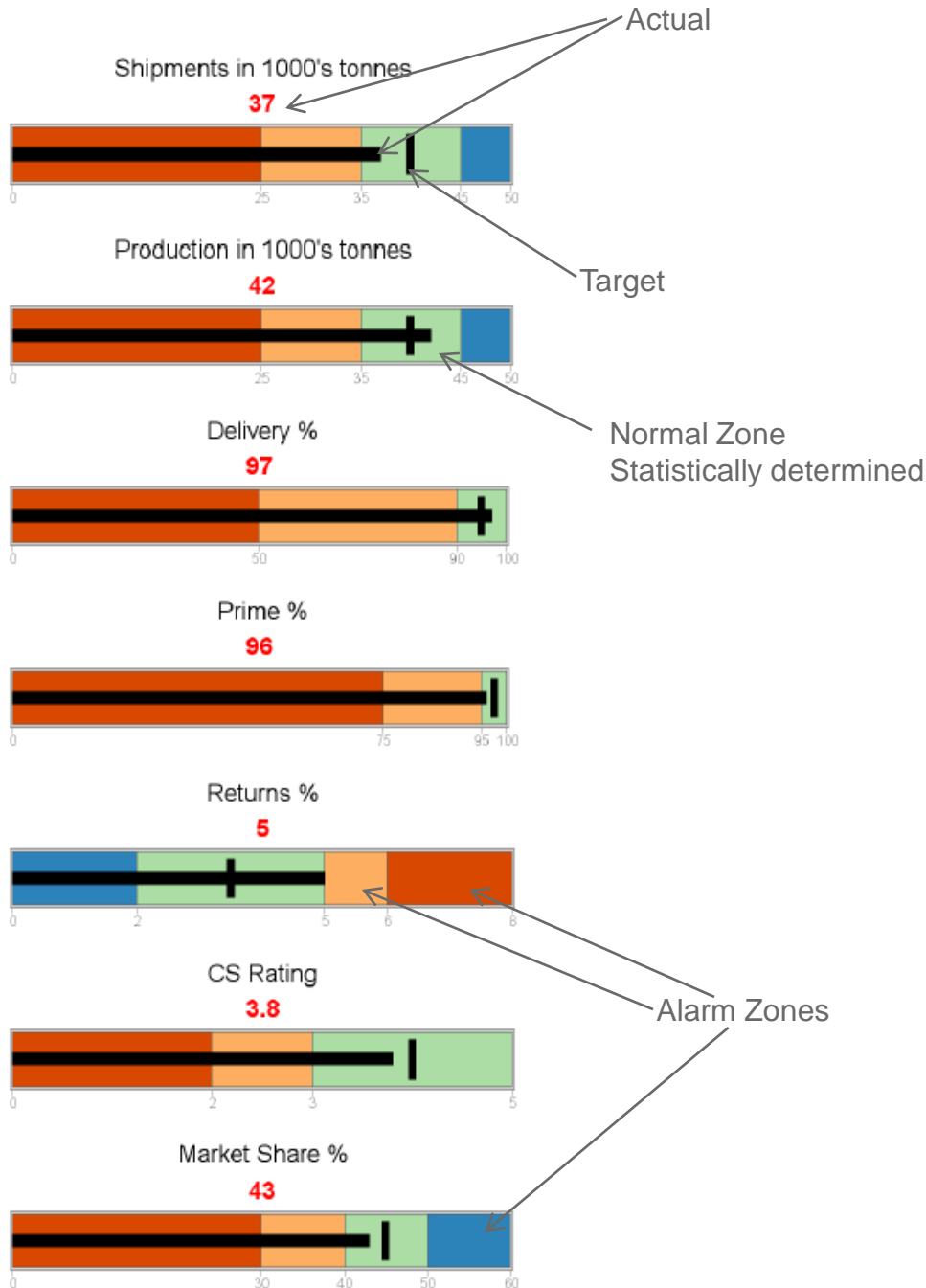
KPI Comparison



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What's better? $>$ or $<$?
When do I need to take action?

Bullet Graphs

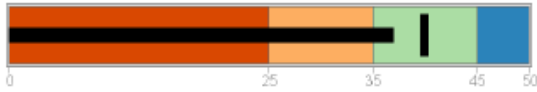


```
options reset=all
device=javaimg
hsize=6in
vsize=1.25in;
```

```
proc gkpi mode=basic;
hbullet
  actual=37 bounds=(0 25 35 45 50)/ target=40
  colors=(cxd94801 cxfae61 cxabdda4
cx2b83ba)
  label="Shipments in 1000's tonnes"
  lfont=(f='helvetica' c=black h=20)
  afont=(f='helvetica' c=red h=20)
  bfont=(f='helvetica' c=gray h=12);
run;
```

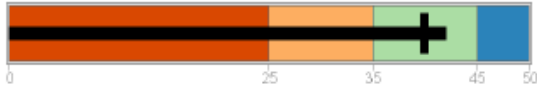

Shipments in 1000's tonnes

37



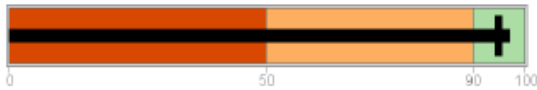
Production in 1000's tonnes

42



Delivery %

97



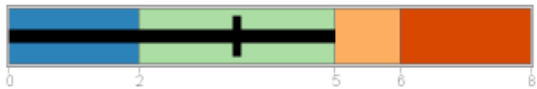
Prime %

96



Returns %

5



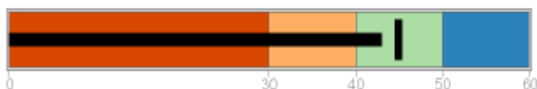
CS Rating

3.8

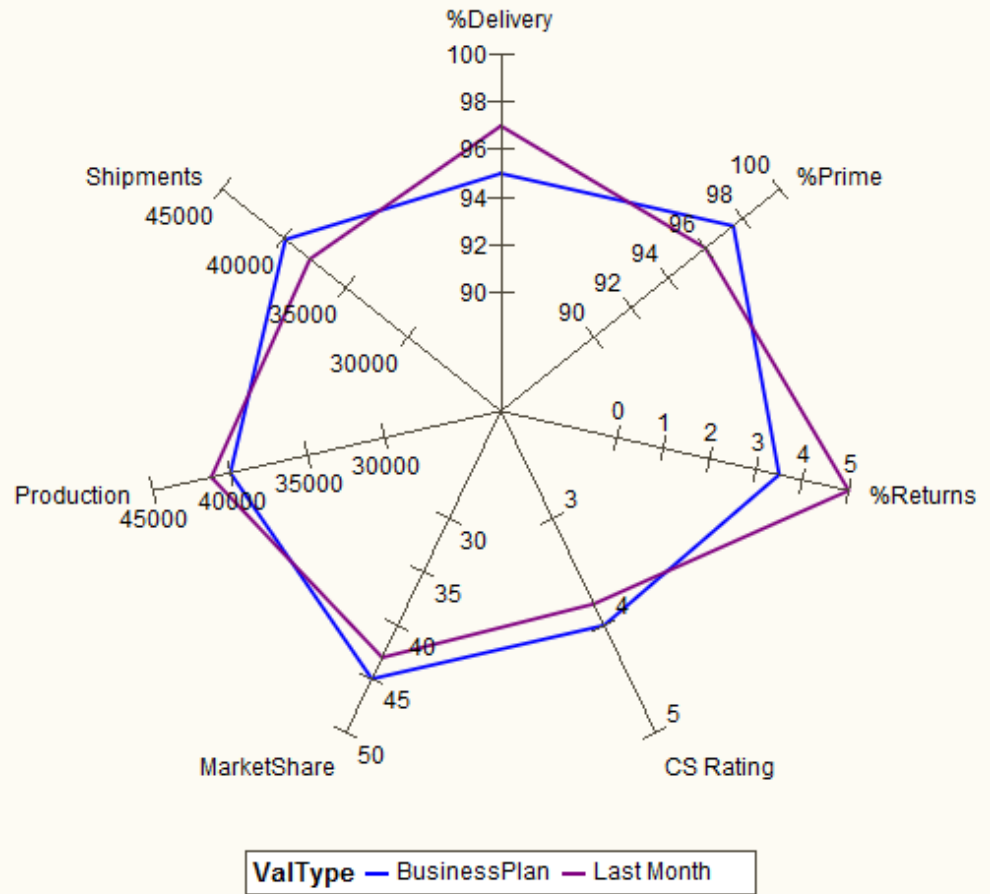


Market Share %

43



KPI Comparison



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“Oh, what a tangled web we weave” ...

Sir Walter Scott



When we fail to expose all ...