



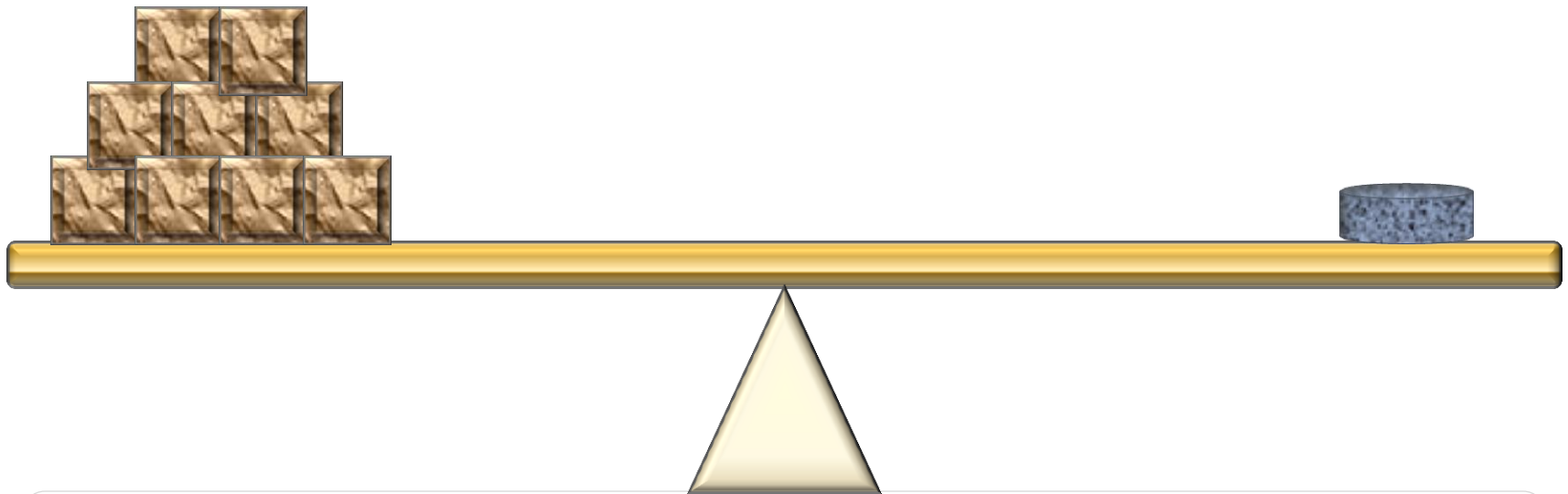
ArcelorMittal

# Proc du Jour- Pareto

GHSUG, October 25, 2012

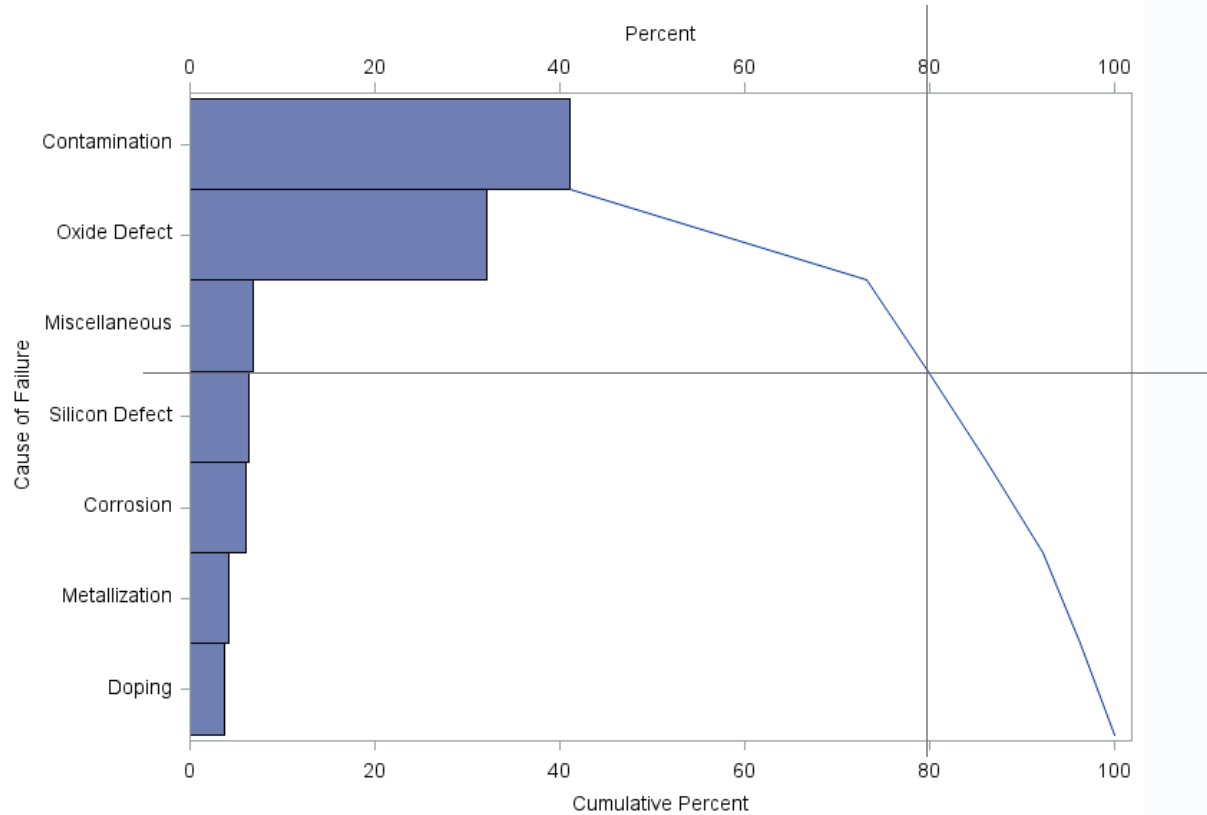
# Topic – Comparisons using Proc Pareto

- Standard Statistical Quality Control method
- A way of identifying what is important based on the 80/20 rule – 20% causes 80%
- Uses Proc Pareto in the QC module



Pareto analysis can tell you how to get the best return on your improvement efforts.

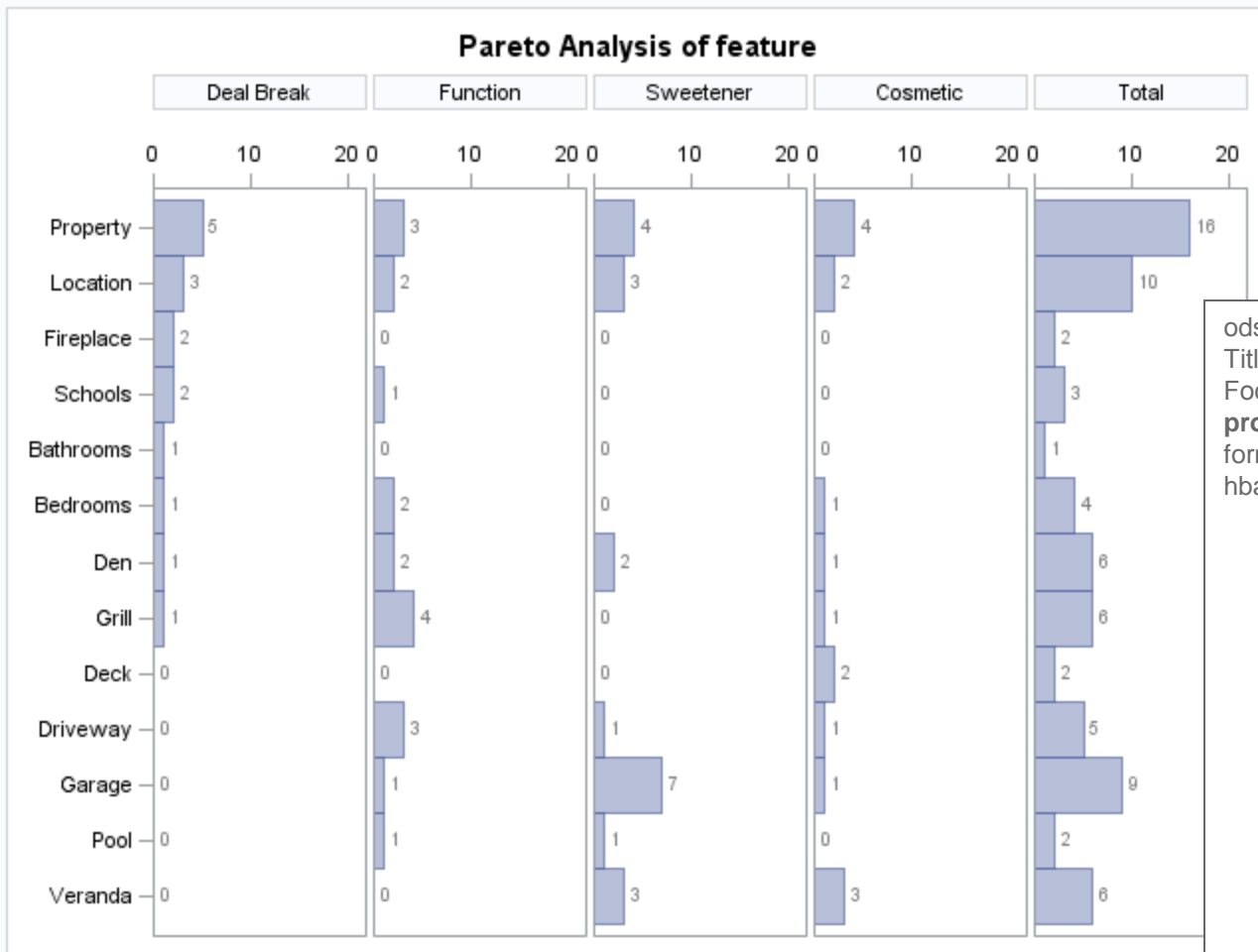
# Traditional Pareto



Sashep dataset: Failure

# Example in code- not real data

Closing House Sales by Property Feature



```
ods listing;  
Title ....;  
Footnote ...;  
proc pareto data=mesfit (where=( rating > 0));  
format rating rating. feature area.;  
hbar feature/class=rating  
    freq=value  
    ncols=5 nrows=1  
    nocurve  
    scale=count  
    novlabel  
    nohlabel  
    barlabel=value  
    barlabpos=hfit  
    cbars=cxfdcc8a  
    cbarline=cxfdcc8a  
    haxis=0,10,20  
    interbar=1  
    intertile=0.7  
    caxis=cxldbdbd  
    noframe;
```

```
run;
```

# Enterprise Guide

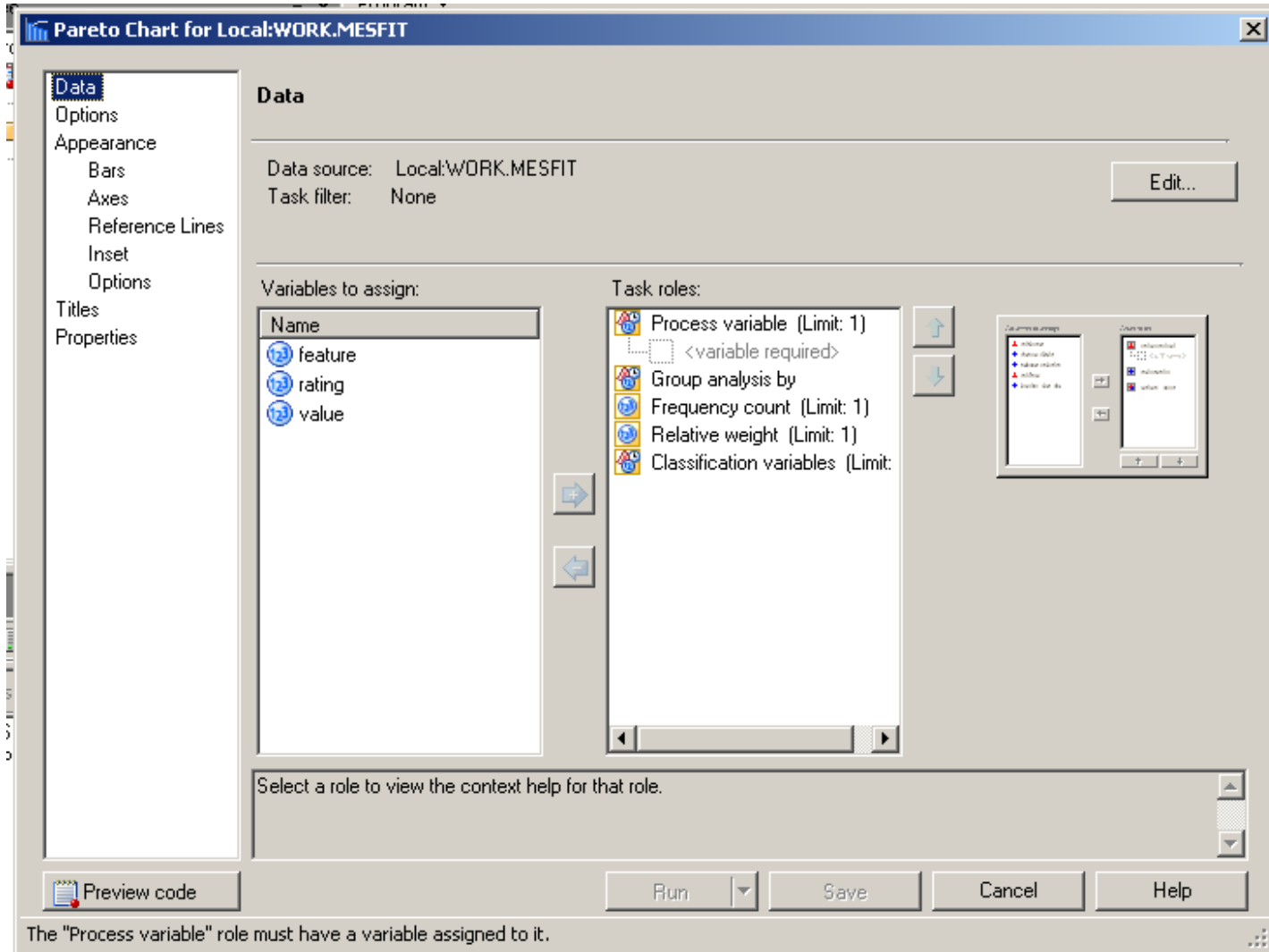
- Step 1: Run a program to generate data and formats

```
data mesfit;
  input feature rating value;
  datalines;
  1 1 5
  2 1 3
  3 1 2
  4 1 2
  5 1 1

  12 5 5
  13 5 5
;
```

```
proc format;
  value rating
  1='Deal Break'
  2='Function'
  3='Sweetener'
  4='Cosmetic'
  5='Total'
;
  value area
  1='Property'
  2='Location'
  3='Schools'
  4='Fireplace'
  5='Bedrooms'
  6='Bathrooms'
  7='Grill'
  8='Den'
  9='Deck'
```

# Create the Pareto → Tasks → Pareto



**Pareto Chart for Local:WORK.MESFIT**

**Data**

Data source: Local:WORK.MESFIT Edit...

Task filter: None

**Variables to assign:**

Name
feature
rating
value

**Task roles:**

- Process variable (Limit: 1) <variable required>
- Group analysis by
- Frequency count (Limit: 1)
- Relative weight (Limit: 1)
- Classification variables (Limit: 1)

**Columns to display:**

Columns to display	Columns to display
<ul style="list-style-type: none"> <li>Process variable</li> <li>Relative weight</li> <li>Frequency count</li> <li>Classification variables</li> </ul>	<ul style="list-style-type: none"> <li>Process variable</li> <li>Relative weight</li> <li>Frequency count</li> <li>Classification variables</li> </ul>

Select a role to view the context help for that role.

Preview code Run Save Cancel Help

The "Process variable" role must have a variable assigned to it.



# Settings

- Data
- Options
- Appearance
  - Bars
  - Axes
  - Reference Lines
  - Inset
  - Options
- Titles
- Properties

Variables to assign:

Name
feature
rating
value

Task roles:

- Process variable (Limit: 1)
  - feature
- Group analysis by
  - value
- Frequency count (Limit: 1)
  - value
- Relative weight (Limit: 1)
  - rating
- Classification variables (Limit: 2)
  - rating

Edit Data and Filter

Data source: Local\WORK.MESFIT

Task filter:

rating Greater than 0

feature Properties

General

feature

Label: Property Feature

Type: Numeric

Length: 8

Format: AREA

Informat: No

Sorted: No

OK Cancel

Appearance > Bars

Orientation:

Vertical Horizontal

Label bars: Height of bar

Highlight bars: Highest 4

Number of bars: 4

Color: [Blue]

Axis settings

Color: [Black]

Width: 1

Background: [White]

Show the axis frame

Scale: Percent Count Weight

Label: [Empty]

Use reference lines

Style: Solid

Color: [Grey]

Specify values for lines:

5  
10  
15

Add

Comparative options group

Rows:

Per page: 2

Label background: [White]

Columns:

Per page: 5

Label background: [White]



# Results

## Closing House Sales by Property Feature

### Pareto analysis of Feature Impact on Sales

