

Enhance visuals with DAX

REPORT DESIGN IN POWER BI



Kevin Feasel
CTO, Faregame Inc

DAX: the good and the bad

Why use DAX?

- Allow us to reshape datasets
- Can help us solve otherwise-difficult problems

Why not use DAX?

- Slower than alternatives
- Can cause considerable lag on some report operations

When should I use DAX?

- Do it in the data source if possible
- Do it in Power Query / M if possible
- Do it in DAX if necessary

Good use cases for DAX

- Filtering data
- Highlighting specific values in data
- Bucketing data
- Pivoting data
- Calculating results from data, especially for complex calculations

Filtering data with calculations

Required Functions

`CALCULATE()` `SUM()`

Example

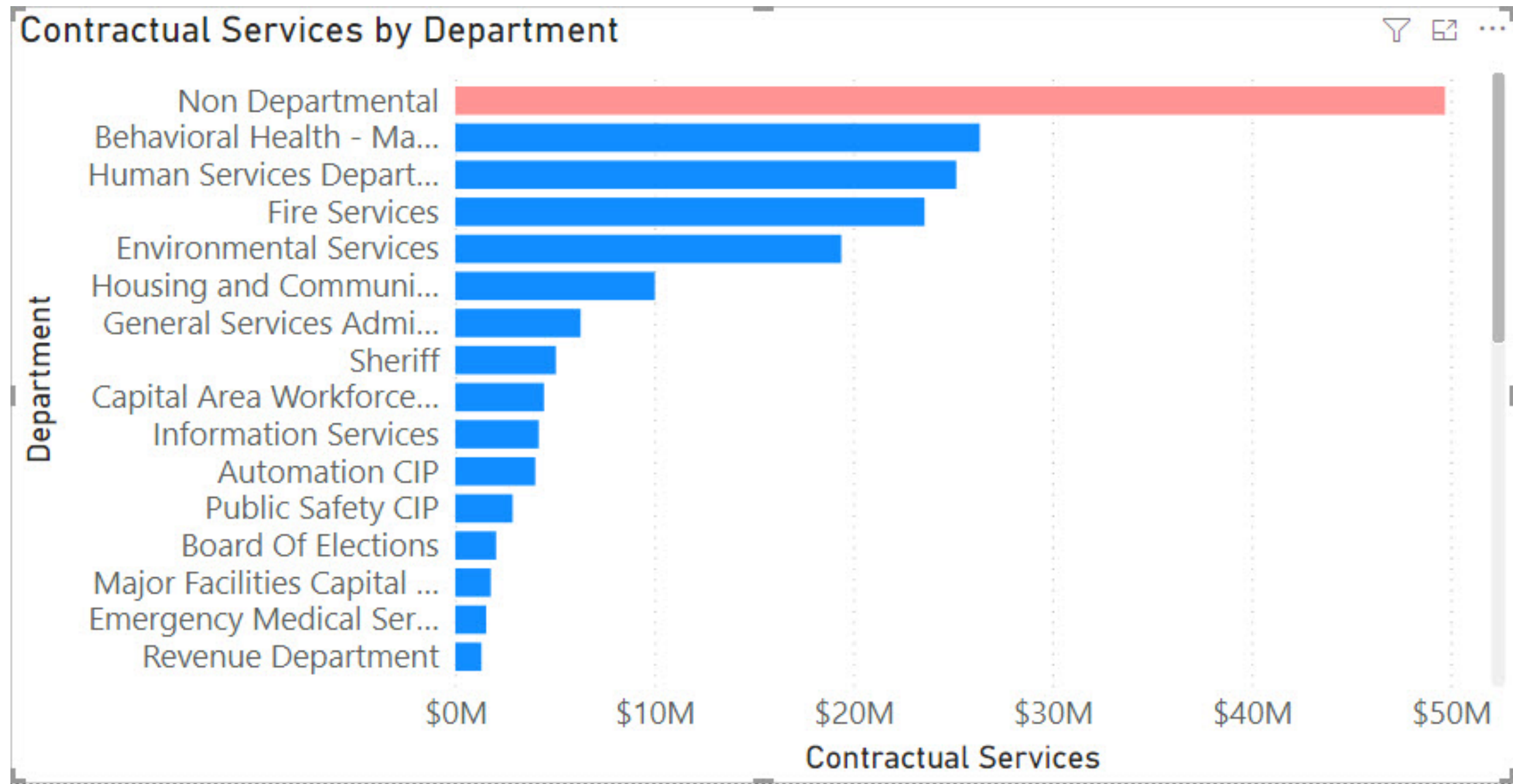
```
[My Measure] = CALCULATE(  
    SUM('This is a table'[NumericColumn]),  
    Table2[FilterCol] = "Some filter"  
)
```

Highlighting values

Example

```
Value to Highlight (Max) =  
    VAR _groupedData = CALCULATETABLE(  
        ADDCOLUMNS(  
            SUMMARIZE('Dim Table', 'Dim Table'[Column]),  
            "@MeasureName", [NumericMeasure]  
        ),  
        ALLSELECTED()  
    )  
    VAR _maxVal = MAXX(_groupedData, [Measure])  
    VAR _currentVal = [Measure]  
    VAR _result = IF(_maxVal = _currentVal, "red", "blue")  
    return _result
```

Highlighting values



Bucketing data

Required Functions

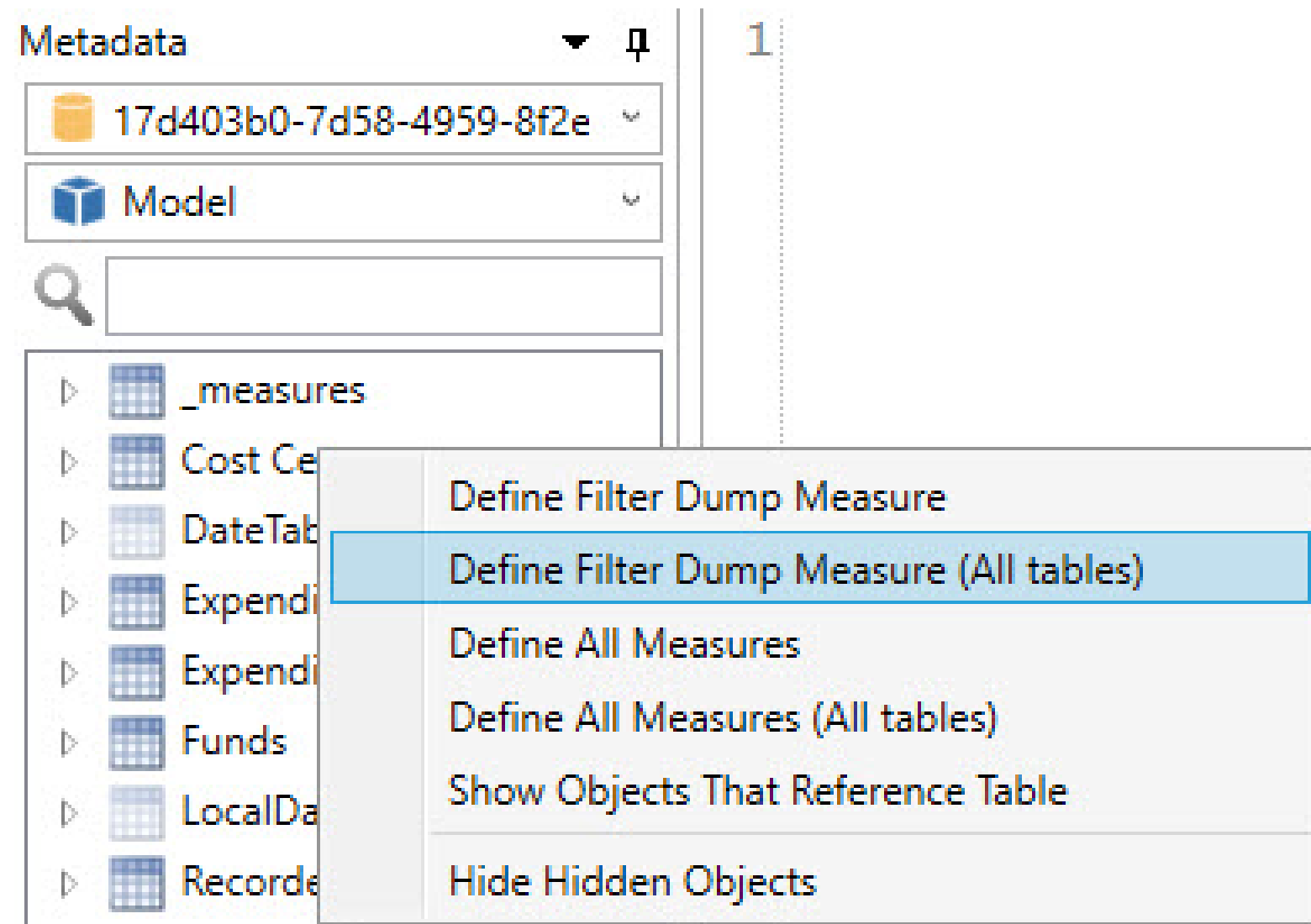
SWITCH() CONTAINSROW()

Example

```
[Bucketed Column] = SWITCH(  
  TRUE(),  
  CONTAINSROW({ "a", "b" }, 'My Table'[DescriptorColumn], "Bucket Name"),  
  CONTAINSROW({ "c" }, 'My Table'[DescriptorColumn], "Bucket 2"),  
  "Default bucket")
```


Filter context

- DAX Studio (external tool) allows creation of "dump filters"
- Display all of the filters currently active on a page



Let's practice!

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Improve engagement with DAX

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