Excel In Extreme Ways

Integrating Excel into your development cycle
Introduction

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What is Extreme Excel to you?
Why should we use Excel

• Everyone has it, and many people already feel comfortable with it
  • Licensing is already in place

• New tools in Excel make it extremely useful

• One version of the truth
One big reason

- Your Subject Matter Experts (SMEs) have used it to one extent or another
  - Typically two levels of experience
    - Casual Users
      - Know basic controls
    - Power Users
      - Tinker with everything but may not have a real understanding of the power at their fingertips
Excel turned Extreme

• In 2010 MS developed PowerPivot for Excel which brought powerful Cube structures to a new in-memory Tabular Data Model

• These power tools have existed dormant in every version of excel, waiting for you to discover them

• These Data Models were also implemented at the server level
Now available in PowerPivot

• Manages your relationships
  • No more need for vlookups
• Create portable and reproducible calculated columns, measures, KPI’s, and Hierarchies
• Refreshing Data from multiple data sources and merging them together
New languages for Excel

• DAX (Data Analysis Expressions) created for PowerPivot
  • similar to excel formula language
New languages continued...

• A whole new add-in was created for ETL (Extract Transform & Loading) data called PowerQuery
  • “M” language created to manage it
Excel as development

• When a Tabular Data Model is created in Excel PowerPivot, it is identical to a Data Model developed on the server

• Now it can be imported wholesale or be recreated in the server environment starting with SQL Server 2014

• All authorized users will be able to access the same data and views
The Server Data Model

• Data in the Data Model on the server is automatically refreshable
• The server Data Model can be accessed from many other programs
  • Excel
  • Tableau
  • Power BI
  • DataZen
Analysis and Data separate

• Your whole data set no longer needs to live in your Excel Workbook nor should it.

• All of your measures, KPIs, Hierarchies, and calculated columns can be managed inside the server data model.

• Thin Excel workbooks can connect your Model and give you a new way to explore data.
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<th>contractor_name</th>
<th>reference</th>
<th>Work_Labour</th>
<th>Sub_Contractor</th>
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</tr>
</tbody>
</table>

**Graphical Representation**

- 2017 - A & R Mechanical Contractors Inc
- 2017 - A & R Services Incorporated
- 2017 - Advanced Commercial Roofing Inc
- 2017 - Allied Mechanical Services Incorporated
- 2017 - Alpha Controls & Services LLC
- 2017 - Anderson Electric Incorporated
- 2017 - Automatic Fire Sprinkler LLC
- 2017 - Bacon & Van Buskirk Glass Co Inc

![Image of Contractor Pricing Proposal Report](image-url)
Excel and Tableau Demo
Next Steps

• SQL Server 2016
  • Many to Many relationships built in
  • Simpler Scripting in SSMS (no more XMLA)
  • Integrated R stored procedures

• SQL server 2017 (version Next)
  • PowerQuery built-in
  • Power BI included with SSRS on premises
Getting Started

• Enable PowerPivot (Download for 2010)
• Enable PowerQuery (Download for 2013 + 2010)
• Download ODAC components for Oracle
• Download DAX studio (optional but very useful)
• Check out DAX formatter and DAX Patterns websites
Questions?
References

- http://www.daxpatterns.com/
- http://www.daxformatter.com/
- https://powerpivotpro.com/?nabm=0
- http://www.sqlbi.com/
- http://excelhero.com/blog/
- https://sites.google.com/site/e90e50charts/
• Thank You!
• Enjoy the rest of the conference!