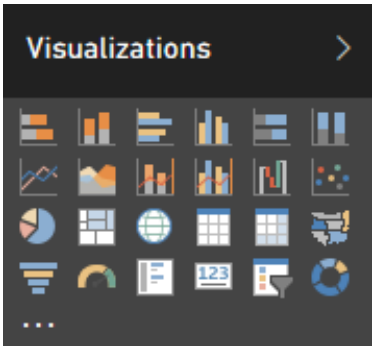
Designing Reports in Power BI Desktop

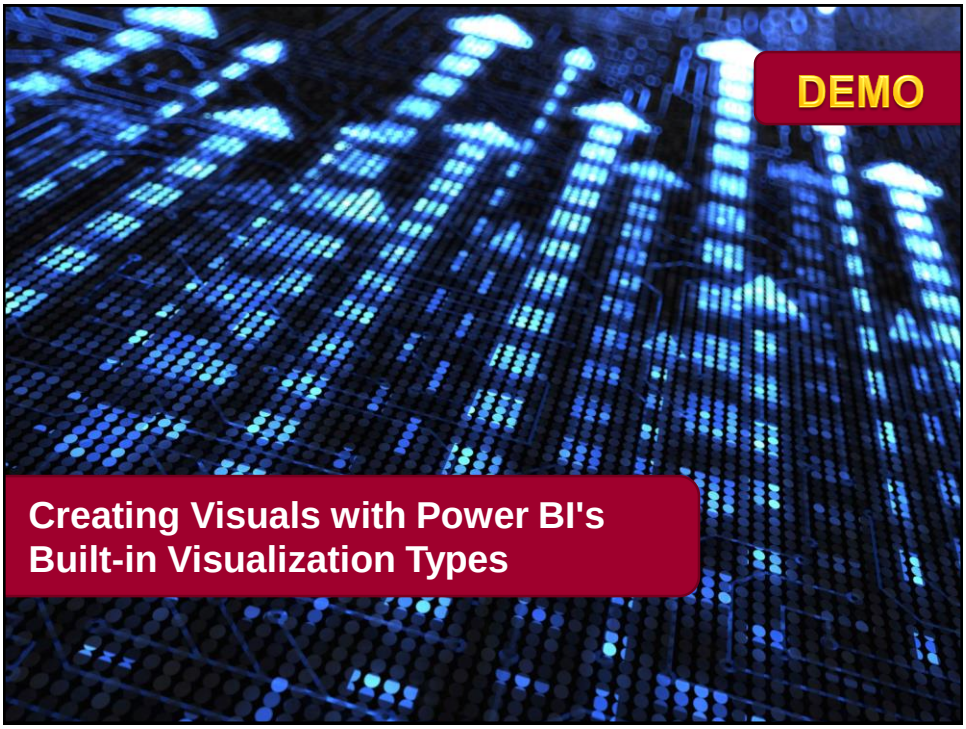
Agenda

- Understanding Visualization Types
- Working with Reports and Visuals
- Designing Interactive Reports
- Publishing Reports to the Power BI Service

Built-in Visualization Types

- Table and Matrix visuals
- Slicers
- Single number card tiles
- Bar charts and Column charts
- Line charts and Pie charts
- Basic (Layered) Area chart
- Combo charts
- Tree Maps
- Waterfall charts
- Doughnut charts
- Funnel charts
- Gauge charts
- Maps (basic)
- Scatter and bubble charts





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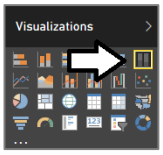
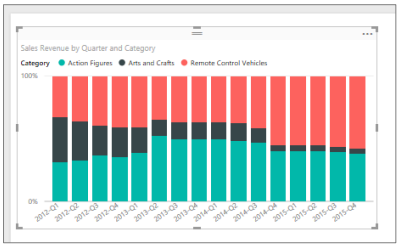
Creating Reports

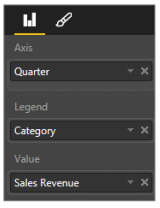
- Power BI Desktop project has one report
  - The report can contain many report pages
  - Report page contains visuals
- Reports can have filters
  - Visual-level filters
  - Page-level filters
  - Report-level filters

Creating Visuals

- Working with visuals
  - Add visual to a page
  - Change its visualization type
  - Add fields to visual wells

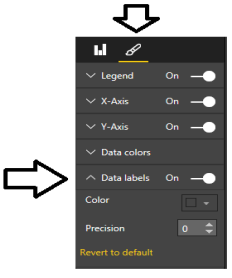


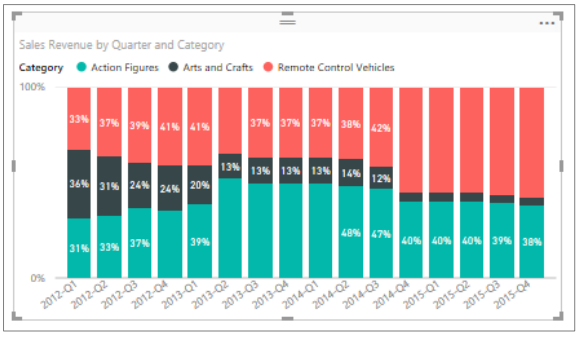




Modifying Visual Properties

- Each visual has editable properties
  - Data properties
  - Appearance properties





Reusing Visuals

- Visuals support copy-and-paste
  - Quick way to clone a visual for reuse

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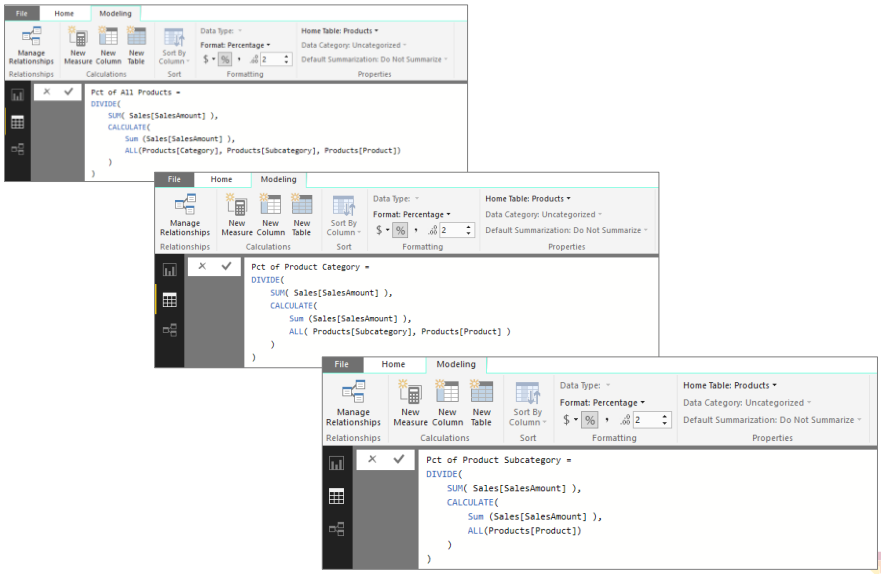
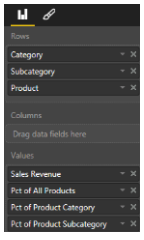
Calculating Percentage of Product sales



The Product Revenue Breakdown Report



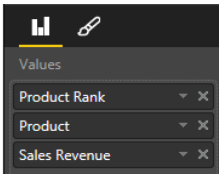
Category	Subcategory	Product	Sales Revenue	Pct of All Products	Pct of Product Category	Pct of Product Subcategory
Action Figures	Cute and Huggable	Black Power Ranger Action Figure	$13,013	0.08 %	0.18 %	0.30 %
		Green Angry Bird Action Figure	$23,295	0.14 %	0.31 %	0.53 %
		Perry the Platypus Action Figure	$401,992	2.33 %	5.44 %	9.23 %
		Phineas and Ferb Action Figure Set	$292,706	1.70 %	3.96 %	6.72 %
		Red Angry Bird Action Figure	$61,654	0.36 %	0.83 %	1.42 %
		Twitter Follower Action Figure	$3,493,118	20.25 %	47.23 %	80.19 %
		Woody Action Figure	$70,287	0.41 %	0.95 %	1.61 %
		Total	$4,356,065	25.25 %	58.90 %	100.00 %
	Tough Guys	Batman Action Figure	$130,768	0.76 %	1.77 %	4.30 %
		Captain America Action Figure	$499,715	2.90 %	6.76 %	16.44 %
		GI Joe Action Figure	$168,905	0.98 %	2.28 %	5.56 %
		Godzilla Action Figure	$1,744,707	10.11 %	23.59 %	57.40 %
		Green Hulk Action Figure	$82,764	0.48 %	1.12 %	2.72 %
		Red Hulk Alter Ego Action Figure	$13,691	0.08 %	0.19 %	0.45 %
		Spiderman Action Figure	$398,834	2.31 %	5.39 %	13.12 %
		Total	$3,039,384	17.62 %	41.10 %	100.00 %
	Total		$7,395,449	42.86 %	100.00 %	100.00 %

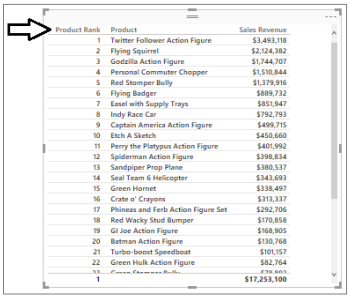
Creating the Top 5 Products Report

- It starts with creating measure to rank products

```
Product Rank =
RANKX(
    ALL(Products),
    CALCULATE( SUM(Sales[SalesAmount]) )
)
```

- Next, add **Product Rank** measure to table visual

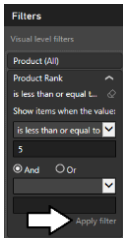


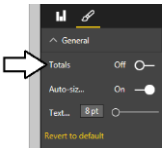


Product Rank	Product	Sales Revenue
1	Twitter Follower Action Figure	$3,493,118
2	Flying Squirrel	$2,124,382
3	Godzilla Action Figure	$1,744,707
4	Personal Commuter Chopper	$1,510,844
5	Red Stomper Bully	$1,379,916
6	Flying Badger	$889,732
7	Easel with Supply Trays	$851,947
8	Indy Race Car	$792,793
9	Captain America Action Figure	$499,715
10	Etch A Sketch	$450,660
11	Perry the Platypus Action Figure	$401,992
12	Spiderman Action Figure	$398,834
13	Sandpiper Prop Plane	$380,537
14	Seal Team 6 Helicopter	$343,693
15	Green Hornet	$338,497
16	Crate o' Crayons	$313,337
17	Phineas and Ferb Action Figure Set	$292,706
18	Red Wacky Stud Bumper	$170,858
19	GI Joe Action Figure	$168,905
20	Batman Action Figure	$130,768
21	Turbo-boost Speedboat	$101,157
22	Green Hulk Action Figure	$82,764
1		$17,253,100

Next Steps

- Apply filter and remove Totals row





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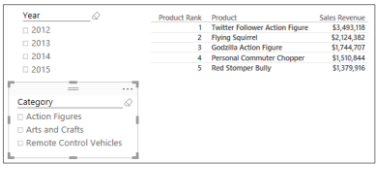
4	Personal Commuter Chopper	$1,510,844
5	Red Stomper Bully	$1,379,916

- Add slicer to make report interactive

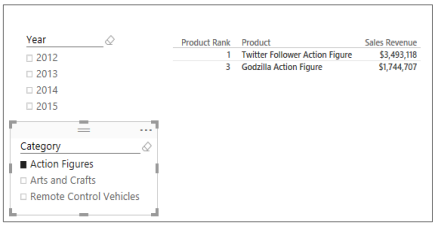
Product Rank	Product	Sales Revenue
1	Easel with Supply Trays	$198,851
2	Godzilla Action Figure	$156,268
3	Red Stomper Bully	$125,251
4	Flying Badger	$69,931
5	Flying Squirrel	$64,564

There a Problem with Measure Filters

- Add a Slicer to filter on product category

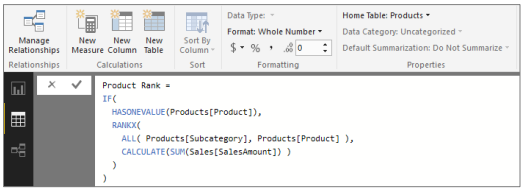


- Top 5 products ranking measure is now broken

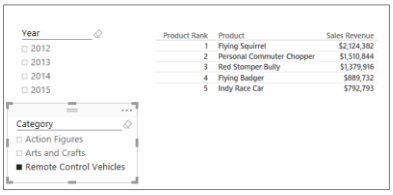


Fixing the Problem

- Rewrite DAX using ALL function
  - Include columns which should not be filtered

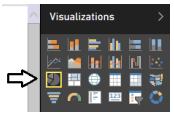


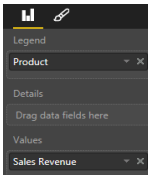
- Top 5 products ranking now works as expected

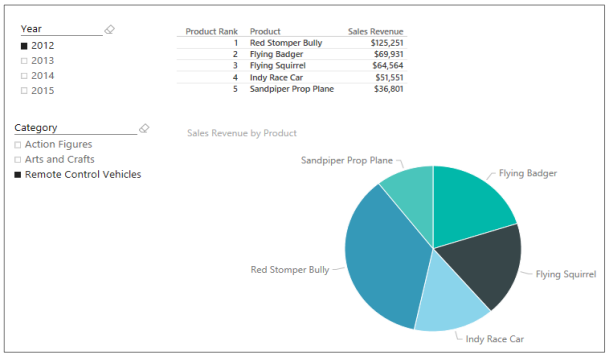


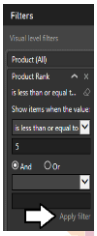
Display Top 5 Products with Two Visuals

- Add pie chart
  - Filter by product rank

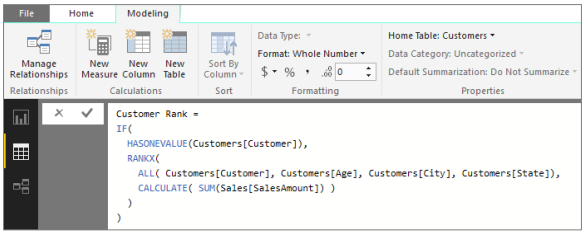


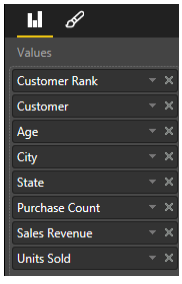


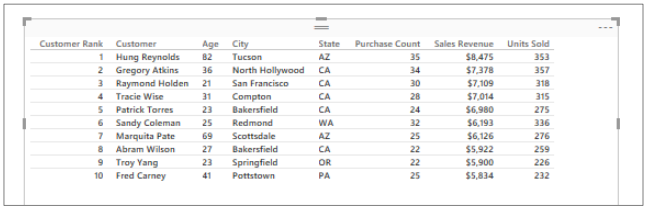




Creating the Top 10 Customers Report

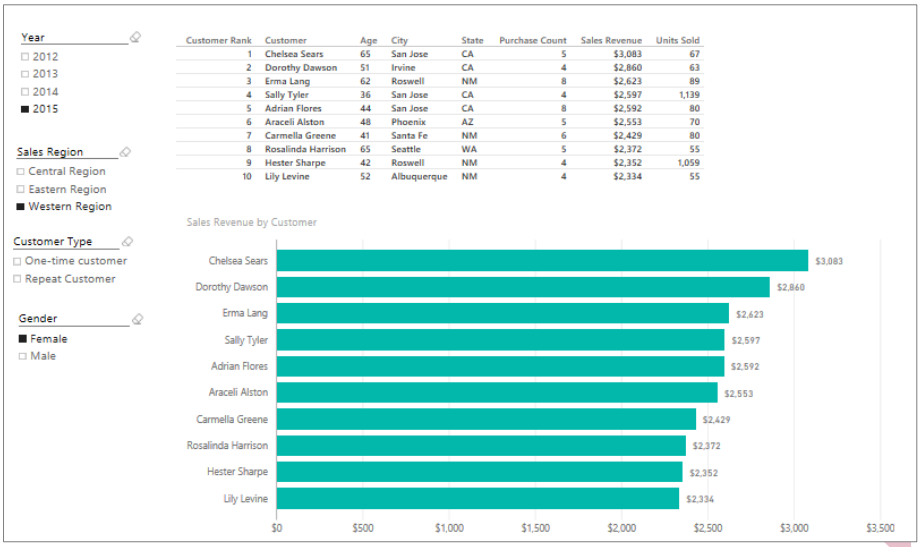






Customer Rank	Customer	Age	City	State	Purchase Count	Sales Revenue	Units Sold
1	Hung Reynolds	82	Tucson	AZ	35	$8,475	353
2	Gregory Atkins	36	North Hollywood	CA	34	$7,378	357
3	Raymond Holden	21	San Francisco	CA	30	$7,109	318
4	Tracie Wise	31	Compton	CA	28	$7,014	315
5	Patrick Torres	23	Bakersfield	CA	24	$6,980	275
6	Sandy Coleman	25	Redmond	WA	32	$6,193	336
7	Marquita Pate	69	Scottsdale	AZ	25	$6,126	276
8	Abram Wilson	27	Bakersfield	CA	22	$5,922	259
9	Troy Yang	23	Springfield	OR	22	$5,900	226
10	Fred Carney	41	Pottstown	PA	25	$5,834	232

The Finished Report



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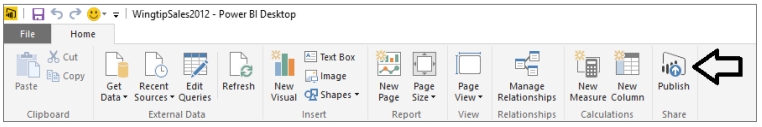
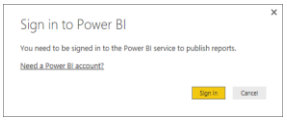
Publishing a Power BI Desktop Project

- Power BI Desktop provides **Publish** command
  - Used to publish project to Power BI service



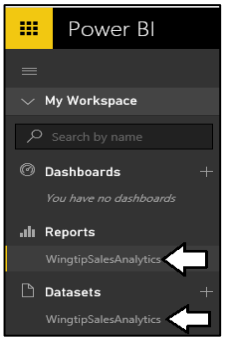
  - Requires logging into your Office 365 account

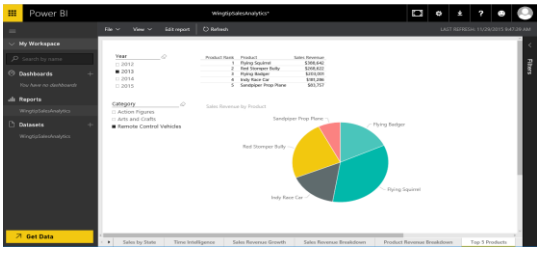


  - Published articles added to your personal workspace

Examining What's Been Published

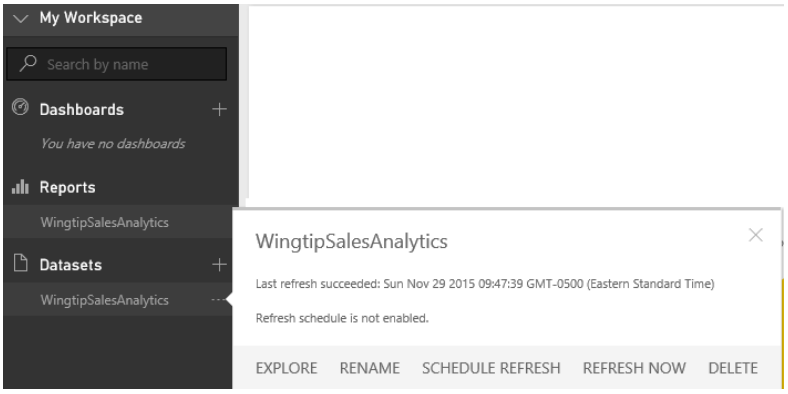
- What does project publishing add to workspace?
  - One dataset with same name as project
  - One report with same name as project





Examining Dataset Properties

- Datasets support renaming and refreshing



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- ✓ Designing Interactive Reports
- ✓ Publishing Reports to the Power BI Service