Microsoft | Power BI

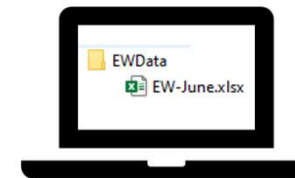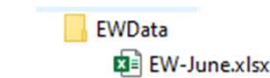# Advanced 2-Day

Alpesh Tailor

Our Data
Local v Cloud

The core data is stored as Excel (.xls) in a folder

EWData
EW-June.xlsx

Local Drive

This folder can be on a **local drive**, however the data updates/refreshes will need to be handled *manually*

Local PC

Cloud Drive

If the folder is stored on a **cloud drive**, e.g. SharePoint | Business OneDrive| AWS | iCloud etc then updates/**refreshes can be *scheduled* via Power BI (Pro or Premium)**
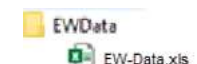

SharePoint
One-Drive
AWS etc

Update Types

Updates may be **Overwritten** or **Appended**

Do you wish to **overwrite** the Excel file every time or **append** to it?

Overwrite

This same file is **overwritten** each day/week/month

EWData
EW-Data.xls

EWData
EW-Data.xls
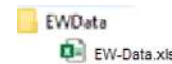
EWData
EW-Data.xls

Append

Each day/week/month a new file is a**dded/appended** to the source folder

EWData
EW-June.xlsx

EWData
EW-June.xlsx
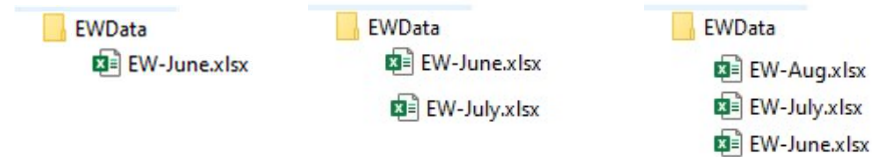EW-July.xlsx

EWData
EW-Aug.xlsx
EW-July.xlsx
EW-June.xlsx
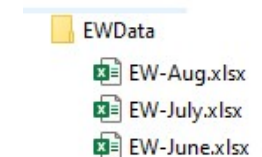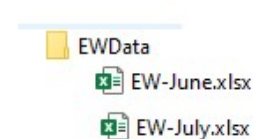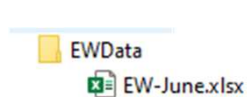
Our Data Architecture

Each month an **additional** .xlsx file is added

Power BI can *Append* the new data to the existing data table via M-Code steps

EWData	EWData	EWData
EW-June.xlsx	EW-June.xlsx	EW-Aug.xlsx
	EW-July.xlsx	EW-July.xlsx
		EW-June.xlsx

36	25 Phyllis All	26-Nov-73	Single	Female	04-Jan
37	26 Marvin All	04-Feb-72	Married	Male	05-Jan

Employees Final | Workshops Final | Training Budget

	A	B
1	EmployeeID	Training Budget
2	1	9500

	A	B	C	D	E	F	G	H	I	J
1	EmployeeID	Employee	BirthDate	MaritalStatus	Gender	HireDate	Dept	Salary	Job Grade	Location
2	17	Amy Albe	06-May-79	Married	Female	11-Apr-98	Production	4096	Operations	Baltimore

	A	B	C	D	E	F	G	H	I	J
1	Course ID	Start Date	Course Code	Course Name	Cost	Supplier	Employee ID	Year	Month	Category
2	T2647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Exports	33	2013	2	Technical

Data Modelling

Data Modelling – Three Relationship Types

1. **One to One**
2. **One to Many**
3. **Many to Many**   *(ideally Power BI prefers One to Many) as this mean less joins -> less processing*

Employees Training Budget

EmployeeID	Training Budget
1	9500
2	8150
3	11000
4	8550
5	6325
6	15250
7	9800
8	16500
9	7000
10	10900
11	5500

One

Employees

EmployeeID	Employee	BirthDate	MaritalStatus	Gender	HireDate	Dept	Salary	Job Grade	Location
17	Amy Albe	06-May-79	Married	Female	11-Apr-98	Production	4096	Operations	Baltimore
1	Gustavo A	15-May-82	Married	Male	31-Jul-02	Sales	2295	Admin	Los Angeles
18	Anna Albr	08-Sep-85	Married	Female	18-Apr-98	Sales	1998	Operations	Beijing
2	Catherine	03-Jun-87	Single	Female	26-Feb-10	Sales	962	Management	London
8	Carla Adar	06-Jul-46	Married	Female	06-Feb-12	Finance	3989	Management	New York
3	Kim Aberc	13-Dec-64	Married	Female	12-Dec-07	Finance	4006	Admin	Paris
4	Humberto	23-Jan-65	Single	Male	05-Jan-07	Logistics	4547	Admin	Amsterdam
28	Cecil Allis	28-Apr-67	Single	Male	05-Jan-04	Human Resou	1711	Operations	London
5	Pilar Acke	29-Aug-49	Married	Female	11-Jan-07	Human Resou	1932	Admin	Baltimore
42	Chris Asht	13-Jan-66	Single	Male	12-Jan-13	Logistics	2018	Admin	Amsterdam
6	Frances A	19-Apr-65	Single	Female	20-Jan-05	Sales	3223	Management	Beijing
49	Cory Boot	18-Feb-87	Married	Male	15-Jan-09	Finance	4491	Management	Beijing
7	Margaret :	16-Feb-46	Single	Female	26-Jan-13	Sales	1329	Operations	Berlin
48	Daniel Bla	06-Aug-88	Single	Male	15-Jan-10	Finance	3110	Management	Baltimore

One

Workshops that Employees attended

Course ID	Start Date	Course Code	Course Name	Cost	Supplier	Employee ID	Year	Month	Category
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	33	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	21	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	19	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	17	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	16	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	15	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	14	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	12	2013	2	Technical
T3647	27-Feb-13	10	Introduction To Excel	£2,400.00	Excel Experts	9	2013	2	Technical
T8486	03-Apr-13	5	Advanced Excel	£2,300.00	Excel Experts	49	2013	4	Techinal
T8486	03-Apr-13	5	Advanced Excel	£2,300.00	Excel Experts	44	2013	4	Techinal

Many

Our Data Model

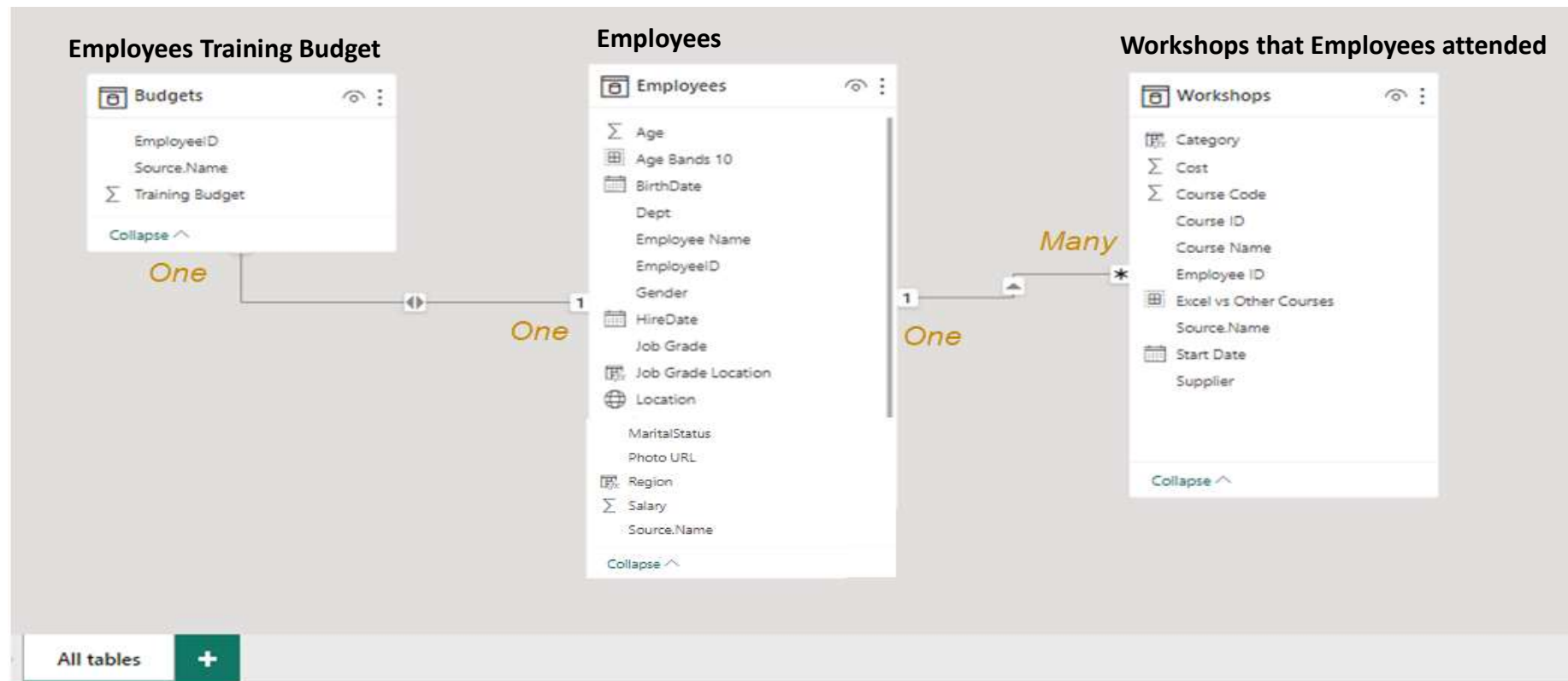## Simpler is better

TIP: Power BI prefers One to Many) as this mean less joins
Performance
Ease of Use
Minimized Risk of Errors

Employees Training Budget

Employees

Workshops that Employees attended

Budgets
- EmployeeID
- Source.Name
- Σ Training Budget

Collapse ∧

Employees
- Σ Age
- ⊞ Age Bands 10
- BirthDate
- Dept
- Employee Name
- EmployeeID
- Gender
- HireDate
- Job Grade
- Job Grade Location
- ⊕ Location
- MaritalStatus
- Photo URL
- Region
- Σ Salary
- Source.Name

Collapse ∧

Workshops
- Category
- Σ Cost
- Σ Course Code
- Course ID
- Course Name
- Employee ID
- ⊞ Excel vs Other Courses
- Source.Name
- Start Date
- Supplier

Collapse ∧

One

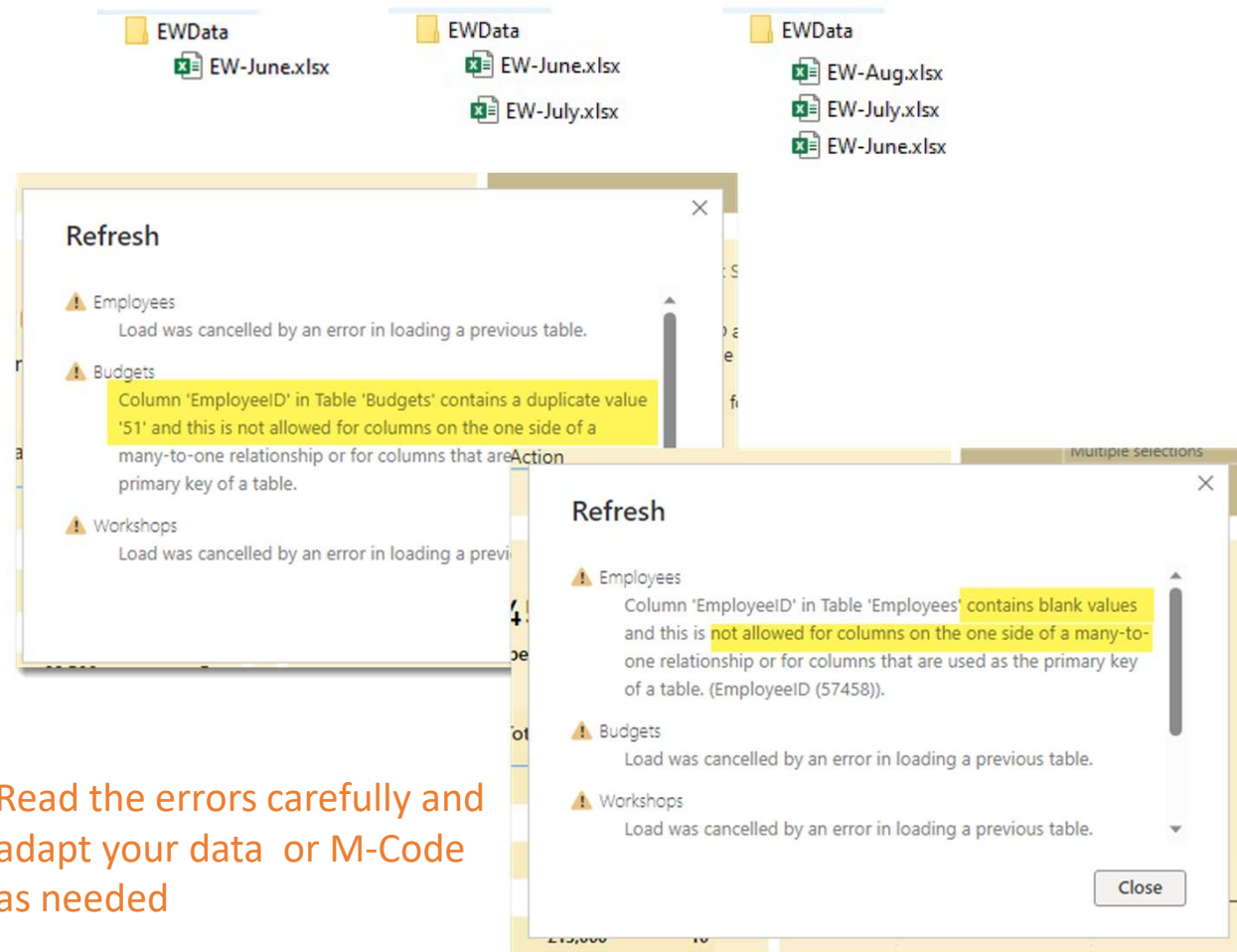One

1

1

Many

*

One

All tables ➕

Testing Data Refreshing

Add an **additional** .xlsx file to the EWData folder

Check that the import if successful

Read the errors carefully and adapt your data or M-Code as needed

Updates Success!

EWData
- EW-June.xlsx

EWData
- EW-June.xlsx
- EW-July.xlsx

EWData
- EW-Aug.xlsx
- EW-July.xlsx
- EW-June.xlsx

Successive data loads will show reflect the updated data

WORKSHOP INFORMATION — JUNE

Advanced Excel, Business Data Analysis, Communication Workshop, etc.

174	47	£337,950	100.00%
Attendees	Courses	Total Spend	% Total Spend

Course Name	Total Spend	Attendees
⊞ Advanced Excel	£79,600	34
⊞ Business Data Analysis	£62,700	19
⊟ Communication Workshop	£54,600	42
⊞ S0443	£14,300	11
⊞ S4590	£6,500	5
⊞ S5500	£10,400	8
⊞ S6708		
⊞ S6908		
⊞ S7778		
⊟ Computer Literacy	£4	
Total	£33	

WORKSHOP INFORMATION — JULY

Advanced Excel, Business Data Analysis, Communication Workshop, etc.

200	52	£381,200	10
Attendees	Courses	Total Spend	% T

Course Name	Total Spend	Att
⊞ Advanced Excel	£79,600	
⊞ Business Data Analysis	£62,700	
⊟ Communication Workshop	£66,300	
⊞ S0443	£14,300	
⊞ S4590	£6,500	
⊞ S5500	£20,800	
⊞ S6708		
⊞ S6908		
⊞ S7778		
⊟ Computer Literacy	£	
Total	£3	

WORKSHOP INFORMATION — AUG

Advanced Excel, Business Data Analysis, Communication Workshop, etc.

220	56	£414,800	100.00%
Attendees	Courses	Total Spend	% Total Spend

Course Name	Total Spend	Attendees
⊞ Advanced Excel	£79,600	34
⊞ Business Data Analysis	£62,700	19
⊟ Communication Workshop	£74,100	57
⊞ S0443	£14,300	11
⊞ S4590	£6,500	5
⊞ S5500	£27,300	21
⊞ S6708		
⊞ S6908		
⊞ S7778		
⊟ Computer Literacy	£8	
Total	£41	

END