

```
In [2]: import pandas as pd  
df = pd.read_csv('../data/processed_data/master_spend_cleand_data.csv')
```

How much is spent on Vendors vs. Grants vs. other types?

```
In [5]: supplier_type_spend = df.groupby('Supplier Type')['Amount'].sum().reset_index()  
supplier_type_spend = supplier_type_spend.sort_values('Amount', ascending=False)  
  
# Adding percentage column  
supplier_type_spend['Percentage'] = (supplier_type_spend['Amount'] / supplier_type_spend['Amount']).sum() * 100  
  
print("Total Spend by Supplier Type:")  
print(supplier_type_spend)
```

Total Spend by Supplier Type:

Supplier Type	Amount	Percentage
Wga Only	1.024423e+10	56.60
Vendor	6.926358e+09	38.27
Grant	9.273213e+08	5.12

What's the average transaction size per supplier type?

```
In [7]: supplier_type_spend = df.groupby('Supplier Type')['Amount'].mean().reset_index()  
supplier_type_spend = supplier_type_spend.sort_values('Amount', ascending=False)  
  
# Adding percentage column  
supplier_type_spend['Percentage'] = (supplier_type_spend['Amount'] / supplier_type_spend['Amount']).sum() * 100  
  
print("Average Spend by Supplier Type:")  
print(supplier_type_spend)
```

Average Spend by Supplier Type:

Supplier Type	Amount	Percentage
Wga Only	2.717303e+07	72.64
Vendor	7.536842e+06	20.15
Grant	2.695701e+06	7.21

```
In [ ]: # Find the dominant supplier type  
dominant = supplier_type_spend.iloc[0]  
  
print(f"\nDominant Supplier Type: {dominant['Supplier Type']}")  
print(f" Total Spend: ${dominant['Amount']:,} .2f")  
print(f" Percentage of Budget: {dominant['Percentage']}%")  
  
# Simple conclusion  
if dominant['Percentage'] > 50:  
    print(f"\n✓ {dominant['Supplier Type']} DOMINATES spending with more than 50%
```

```
else:  
    print(f"\n✓ Spending is relatively DISTRIBUTED across supplier types")
```

🏆 Dominant Supplier Type: Wga Only
💰 Total Spend: £27,173,032.27
📊 Percentage of Budget: 72.64%

✓ Wga Only DOMINATES spending with more than 50% of total budget!

In [3]: df

Out[3]:

	Date of Payment	Expense Type	Expense Area	Supplier	Transaction Number	Amount	Description
0	2024-01-02	Other It Consultancy	Dsit - Science, Innovation And Growth - Dsit -...	Atkinsrealis Uk Ltd	567929	134394.66	D Nat Undergr A Regi C
1	2024-01-02	Grant-in-aid To Arms Length Bodies	Dsit - Science, Innovation And Growth - Dsit -...	Ukri - Engineering And Physical Sciences Resear...	566724	90000000.00	Dsit - E Financ grant-ir To Arms
2	2024-01-02	Grant-in-aid To Arms Length Bodies	Dsit - Science, Innovation And Growth - Dsit -...	Ukri - Medical Research Council	566725	36000000.00	Dsit - Financ grant-ir To A Le
3	2024-01-02	Grant-in-aid To Arms Length Bodies	Dsit - Science, Innovation And Growth - Dsit -...	Ukri - Biotechnology And Biological Science Re...	566726	10000000.00	D Rese Cou Per Sch (Bb)
4	2024-01-02	Grant-in-aid To Arms Length Bodies	Dsit - Science, Innovation And Growth - Dsit -...	Ukri - Biotechnology And Biological Science Re...	566730	22000000.00	Dsit - E Financ grant-ir To Arms
...
1635	2024-12-09	External Legal Advice And Service	Dsit - Digital And Technology Group - Dsit - D...	Department For Business And Trade (Dbt)	615608	95709.31	Dsit - Tr I Inte Governan A
1636	2024-12-11	R & D Current Grants To Central Government	Dsit - Science, Innovation And Growth - Dsit -...	Coventry City Council	634438	62158.94	Dsit - I Regula Pio Fund-r

	Date of Payment	Expense Type	Expense Area	Supplier	Transaction Number	Amount	Descrip
1637	2024-12-12	R & D Current Grants To Private Sector - Npish	Dsit - Science, Innovation And Growth - Dsit -...	Teesside University	642993	27826.00	Dsit - Tac Fund-r Cui Grants To
1638	2024-12-12	Consultancy Expenditure	Dsit - Digital And Technology Group - Dsit - I...	Silicon Catalyst Uk Ltd	643386	47233.00	Dsit - I Ser Program consult
1639	2024-12-12	R&D Current Grants To Public Corporations	Dsit - Science, Innovation And Growth - Dsit -...	Npl Management Ltd	639656	293140.67	Dsit - Strat Prio Analy

1640 rows × 9 columns

In []: