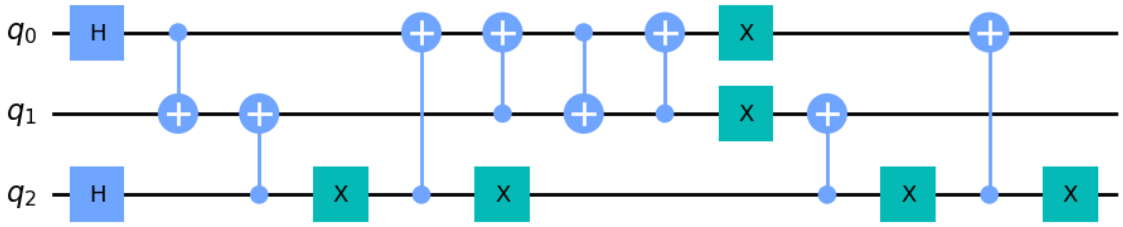
In [1]:
```
import numpy as np
from qiskit import *
from qiskit import Aer
from qiskit.visualization import plot_state_city

# Create a Quantum Circuit acting on a quantum register of three qubits
circ = QuantumCircuit(3)

circ.h(0)
circ.h(2)
circ.cx(0,1)
circ.cx(2,1)
circ.x(2)
circ.cx(2,0)
circ.x(2)
circ.cx(1,0)
circ.cx(0,1)
circ.cx(1,0)
circ.x(0)
circ.x(1)
circ.cx(2,1)
circ.x(2)
circ.cx(2,0)
circ.x(2)

circ.draw('mpl')
```

Out[1]:




In [ ]:
```
```

In [2]:
```
# Run the quantum circuit on a statevector simulator backend
backend = Aer.get_backend('statevector_simulator')

# Create a Quantum Program for execution
job = backend.run(circ)

result = job.result()
outputstate = result.get_statevector(circ, decimals=3)
print(outputstate)

plot_state_city(outputstate)
```

```
Statevector([0.5+0.j, 0. +0.j, 0. +0.j, 0.5+0.j, 0.5+0.j, 0. +0.j, 0. +0.j,
             0.5+0.j],
            dims=(2, 2, 2))
```

Out[2]: