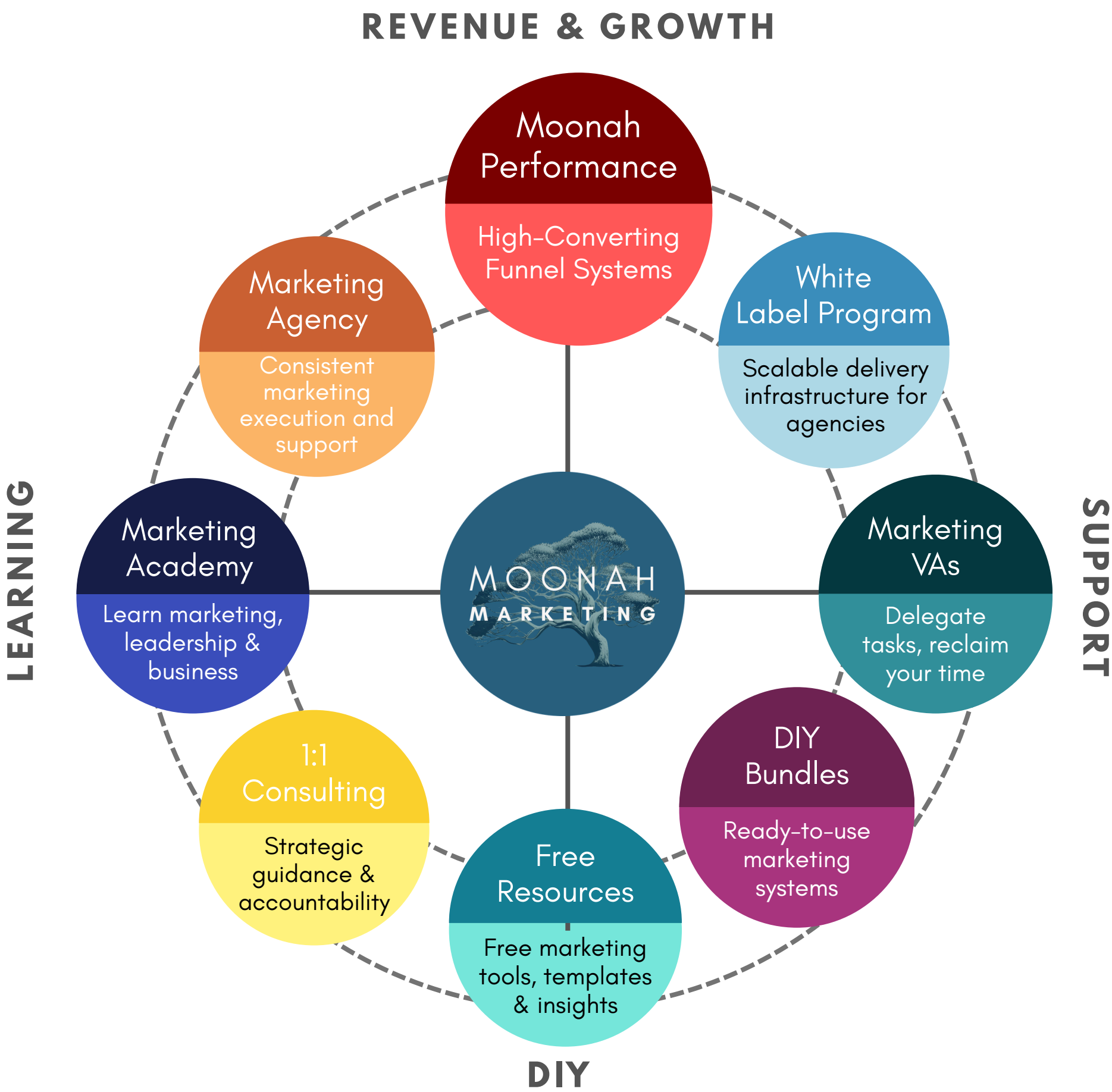MOONAH MATRIX