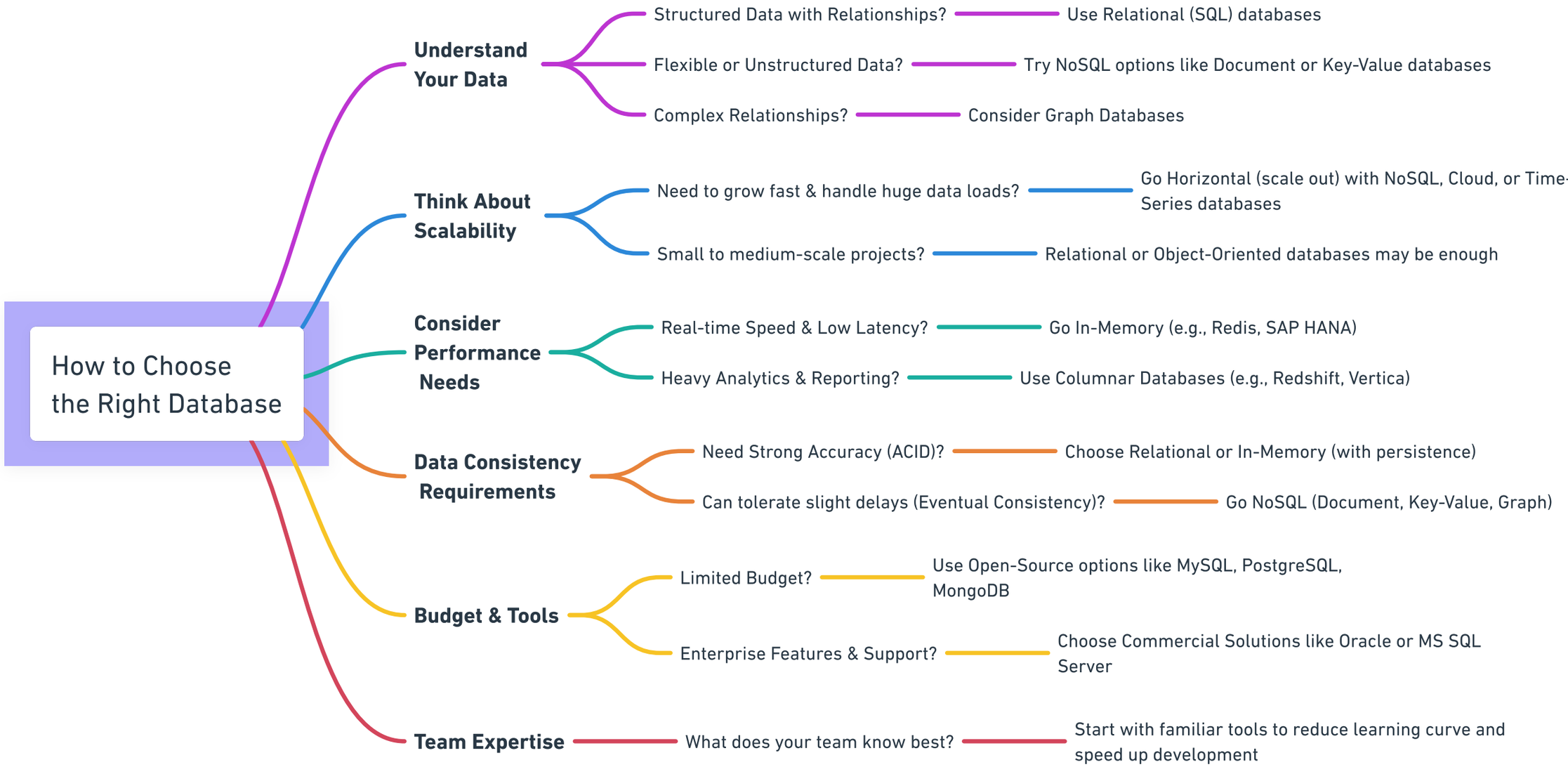
How to Choose the Right Database
Understand Your Data
Structured Data with Relationships?
Use Relational (SQL) databases
Flexible or Unstructured Data?
Try NoSQL options like Document or Key-Value databases
Complex Relationships?
Consider Graph Databases
Think About Scalability
Need to grow fast & handle huge data loads?
Go Horizontal (scale out) with NoSQL, Cloud, or Time-Series databases
Small to medium-scale projects?
Relational or Object-Oriented databases may be enough
Consider Performance Needs
Real-time Speed & Low Latency?
Go In-Memory (e.g., Redis, SAP HANA)
Heavy Analytics & Reporting?
Use Columnar Databases (e.g., Redshift, Vertica)
Data Consistency Requirements
Need Strong Accuracy (ACID)?
Choose Relational or In-Memory (with persistence)
Can tolerate slight delays (Eventual Consistency)?
Go NoSQL (Document, Key-Value, Graph)
Budget & Tools
Limited Budget?
Use Open-Source options like MySQL, PostgreSQL, MongoDB
Enterprise Features & Support?
Choose Commercial Solutions like Oracle or MS SQL Server
Team Expertise
What does your team know best?
Start with familiar tools to reduce learning curve and speed up development