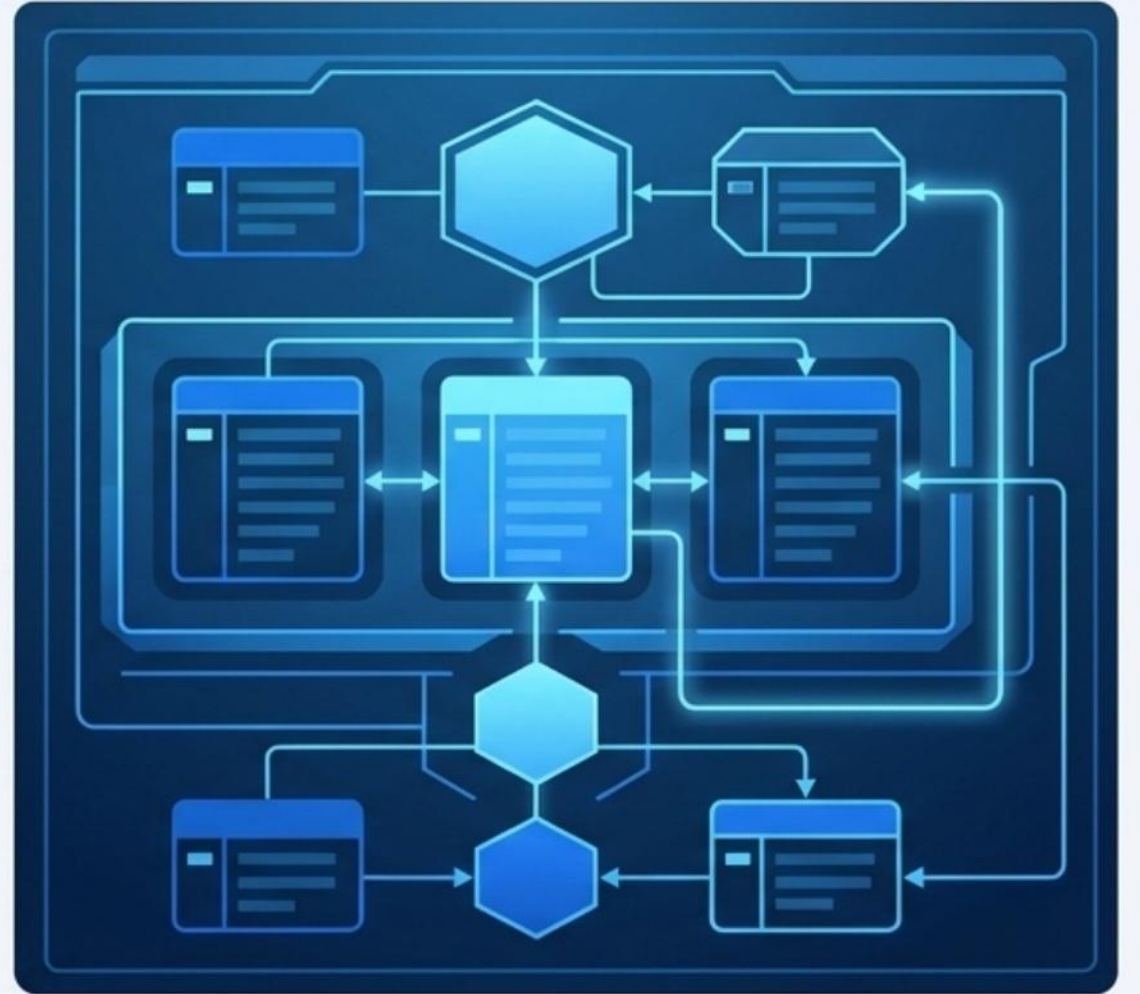
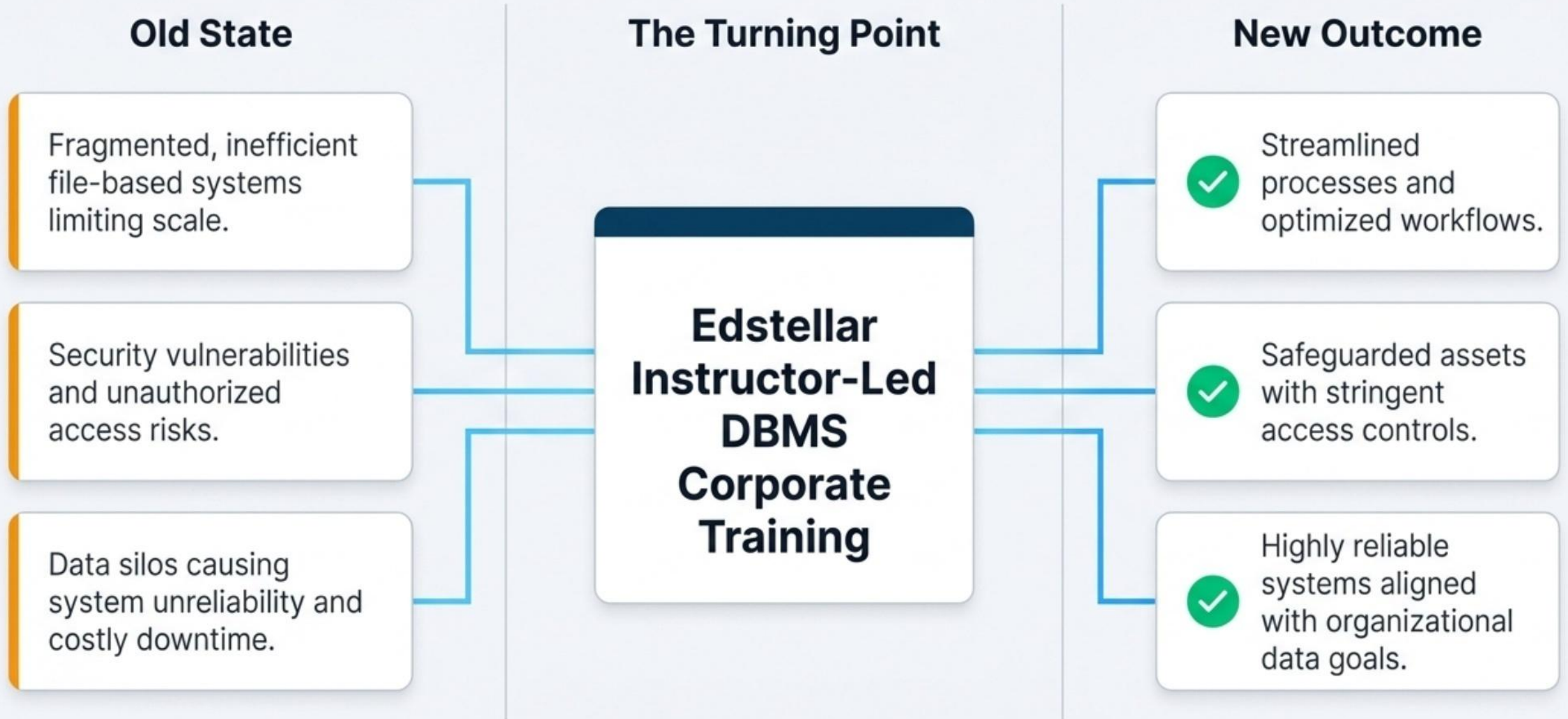


Database Management System Training: The Capability That Changes Everything

Equip your teams to design databases that support critical decision-making, handle complex architectures, and drive enterprise efficiency.



The Capability Activation Curve



Course At-a-Glance



40-45 Hours

Comprehensive
Curriculum Duration



Instructor-Led

Expert Guidance &
Interactive Labs



3 Modalities

Virtual Live, On-site,
or Off-site Delivery



10 Languages

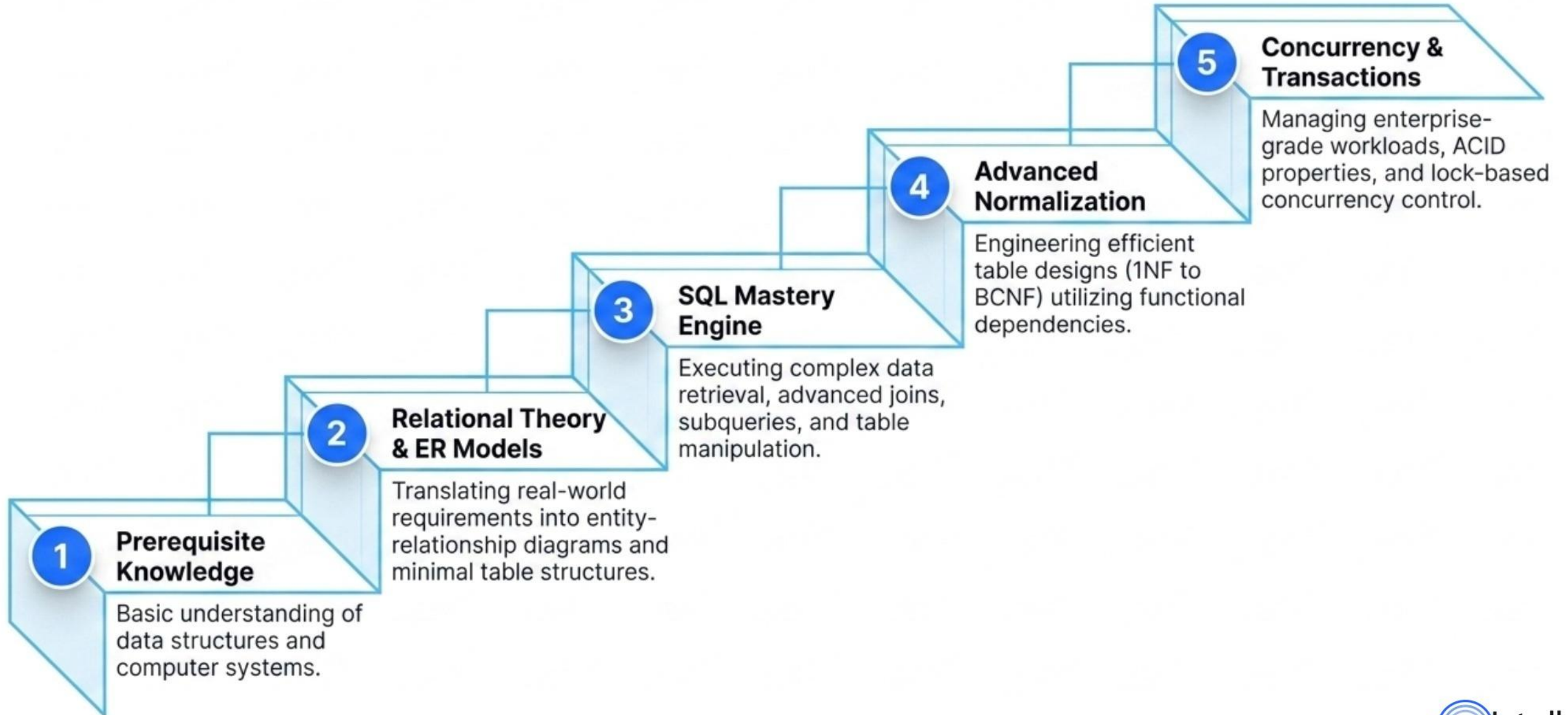
Standardized Global
Delivery



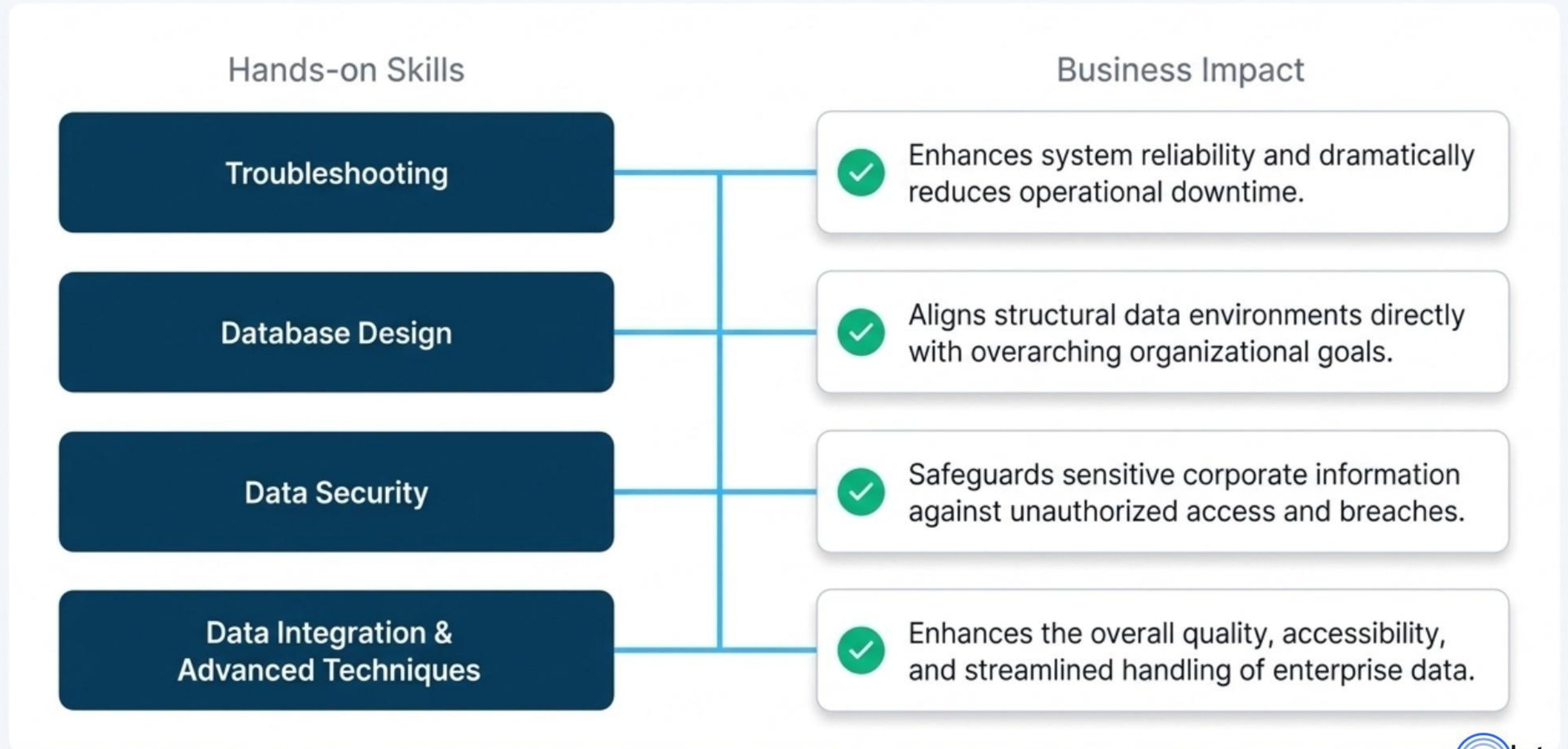
Certification

Edstellar Verified
Completion Credential

The Learning Ascent



Core Skills & Business Impact Matrix



Who Needs This? (Target Audience Diagnostic)

Administrators & Architects

Database Administrators, Data Architects, IT Managers, Database Consultants.

Master system reliability, access control (DCL), concurrency, and lock-based protocols to safeguard enterprise infrastructure.

Analysts & Scientists

Data Analysts, Business Intelligence Analysts, Data Scientists, Systems Analysts.

Leverage advanced SQL queries, complex joins, and data integration techniques for precise decision-support and reporting.

Developers & Engineers

Database Developers, SQL Developers, Application Developers, Data Engineers.

Optimize database design through ER modeling, B+ Tree indexing, and rigorous normalization (up to BCNF).

Syllabus Deep-Dive I: Architecture & Theory

Core Systems & Constraints

Files vs. DBMS

- Moving beyond file-based system drawbacks.
- Defining Data Integrity constraints (NOT NULL, UNIQUE, CHECK).
- Establishing Primary, Foreign, and Composite Keys.

Entity-Relationship (ER) Modeling

Visualizing Architecture

- Mastering ER diagram symbols.
- Managing One-to-One, One-to-Many, and Many-to-Many relationship cardinalities.
- Handling weak/strong entities and self-referential relationships.

Relational Frameworks

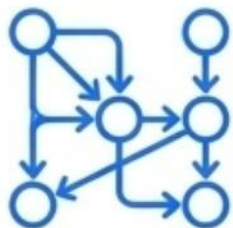
Mathematical Foundations

- Applying set theory to relational schemas.
- Executing Relational Algebra (Select, Project, Union, Division).
- Formulating queries using Tuple and Domain Relational Calculus.

Syllabus Deep-Dive II: SQL Mastery Engine



Syllabus Deep-Dive III: Performance & Scale



Functional Dependencies & Normalization

Concept: Engineering minimal, efficient table designs.

Curriculum: Computing attribute closure and deriving minimal covers. Progressing through First, Second, and Third Normal Forms (1NF, 2NF, 3NF) up to Boyce-Codd Normal Form (BCNF).



Transactions & Concurrency Control

Concept: Ensuring data integrity during simultaneous access.

Curriculum: Mastering ACID properties. Comparing Conflict vs. View Serializability. Implementing lock-based mechanisms and timestamp protocols to prevent deadlocks and starvation.



File Structure & Indexing Optimization

Concept: Accelerating data retrieval at scale.

Curriculum: Fundamentals of database file structures. Designing and applying advanced B-Trees and B+ Trees for optimal database indexing.

Global Delivery Mechanics



Virtual Live Instructor-Led

Standardized content across distributed teams.

- Join from own workspace (zero travel).
- Highly scalable to large groups.
- Interactive tools maintain engagement.



On-Site Face-to-Face

Immersive, tailored learning at your headquarters.

- Tailored setup to your exact workplace tools.
- Live demos with direct trainer access.
- Group exercises drive immediate collaboration.



Off-Site Face-to-Face

Focused, uninterrupted development.

- Hosted at a preferred external venue.
- Built-in group activities for team bonding.
- Signals high commitment and boosts morale.

The Edstellar Scalability Advantage



10,000+

Vetted Industry Expert Trainers
globally deployed.

100+ Countries

Standardized content ensuring consistent
operational outcomes anywhere in the world.

10 Languages Supported

English, Español, 普通话, Deutsch, العربية,
Português, हिंदी, Français, 日本語, Italiano.

Proven Impact & Testimonials



"Understanding strategic frameworks was essential, and this training delivered beyond real-world experience. I now handle complex technical scenarios with enhanced confidence and systematic efficiency."

Ashley Gilbert

Senior Business Intelligence Developer,
Business Management Consultancy



"The deep coverage of real-world case studies gave me advanced skills I immediately applied. Our project success rate and profitability increased dramatically within the quarter."

Zhao Qiang

Principal Analytics Architect,
Strategic Management Company

Enterprise Training Packages

Starter

Tailored for SMBs

**120
Licenses**

64 hours of group training
(VILT or In-person On-site)

Most Popular

Growth

Ideal for growing SMBs

**320
Licenses**

160 hours of group training
(VILT or In-person On-site)

Enterprise

Designed for large corporations

**800+
Licenses**

400 hours of group training
(VILT or In-person On-site)

*Custom packages for unlimited licenses and duration are also available.

Certification & Sustainment



Enterprise Validation

Validates acquired skills, ensuring your organization possesses verified, industry-standard database management capabilities.



Employee Sustainment

Acts as a powerful recognition tool, motivating technical teams to continuously enhance their expertise and commit to overarching organizational success.

Activate Your Data Transformation Program Today

1

Download

Download the Edstellar training requirement template.

2

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Add the required Database Management System workshops for your teams.

3

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Upload via our platform for a rapid quote, or email directly to our enterprise team.

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