Applied Data Analytics Using Qlik Sense

Week 1 Takeaways
The Power and Potential of Data and Analytics

Qlik Q® LEAD WITH DATA™

Potential Risks with Data

Data that is incomplete, incorrect, or not trusted

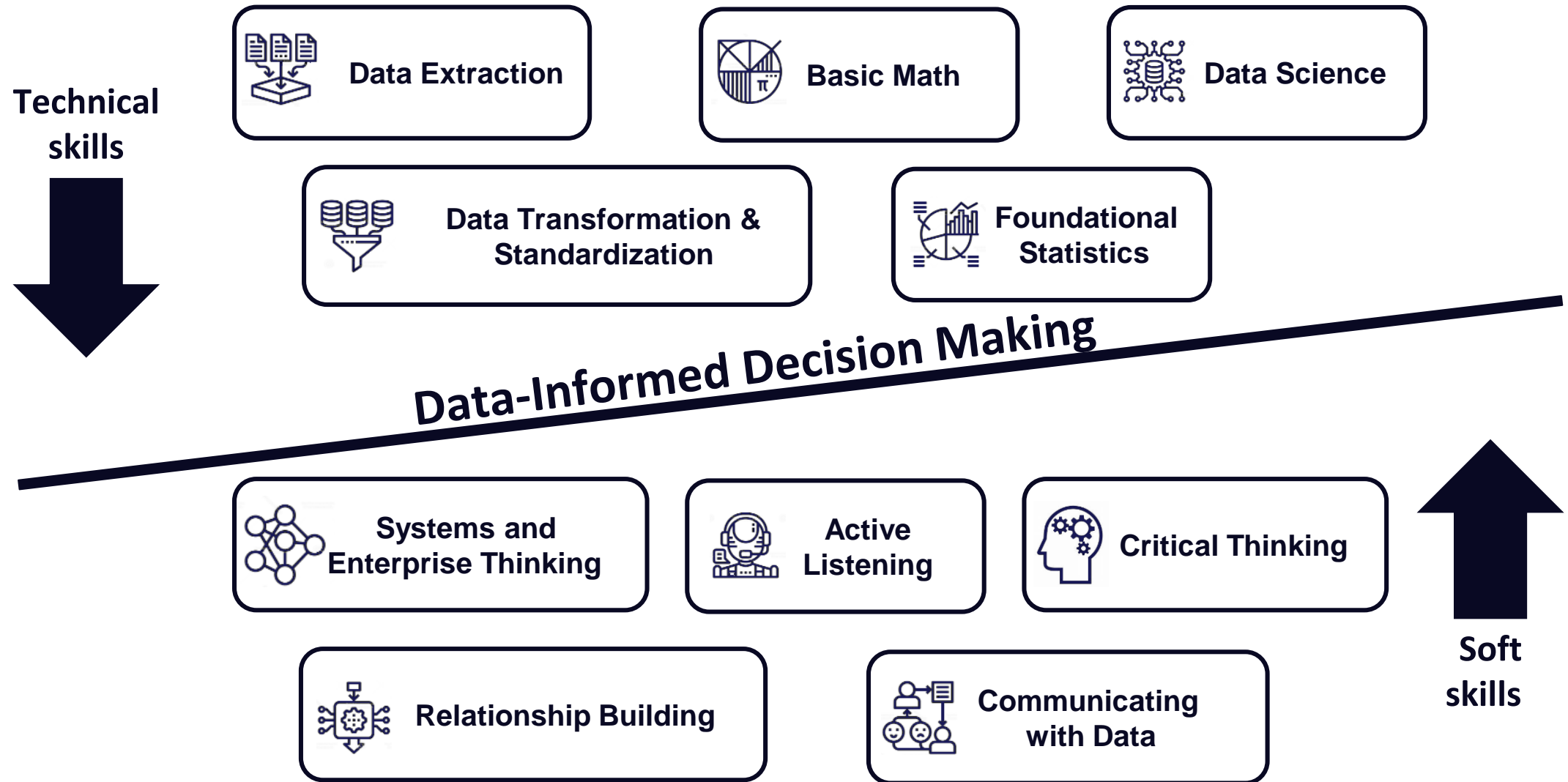**Incorrectly built and interpreted visualizations and analytics**

Incorrect assumptions and cognitive bias

Relying solely on data and/or intuition and not both
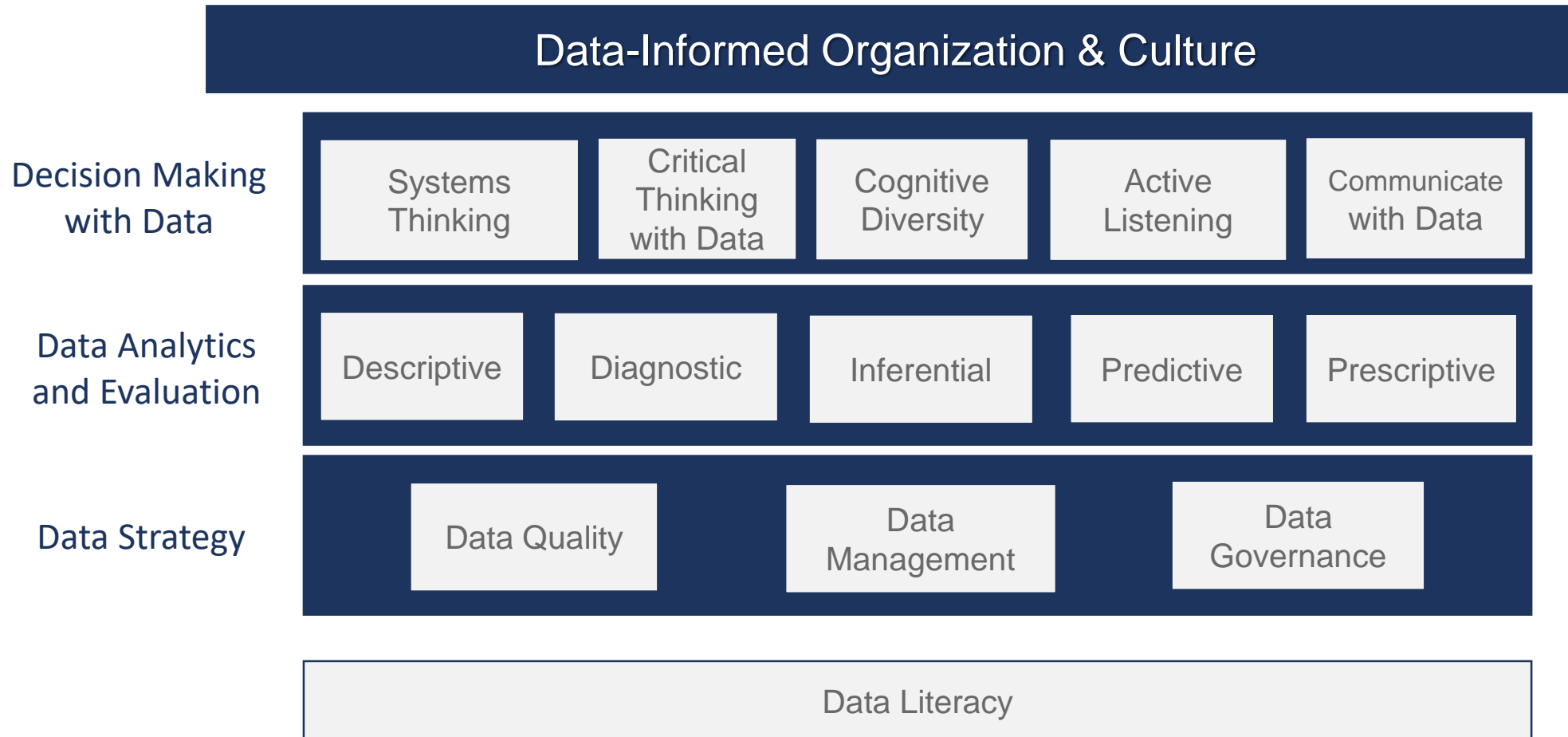
Unethical or illegal use

Incorrectly communicating decisions with data

Decision Making requires hard and soft skills

Technical skills

Data Extraction

Basic Math

Data Science

Data Transformation & Standardization

Foundational Statistics

Data-Informed Decision Making

Systems and Enterprise Thinking

Active Listening

Critical Thinking

Relationship Building

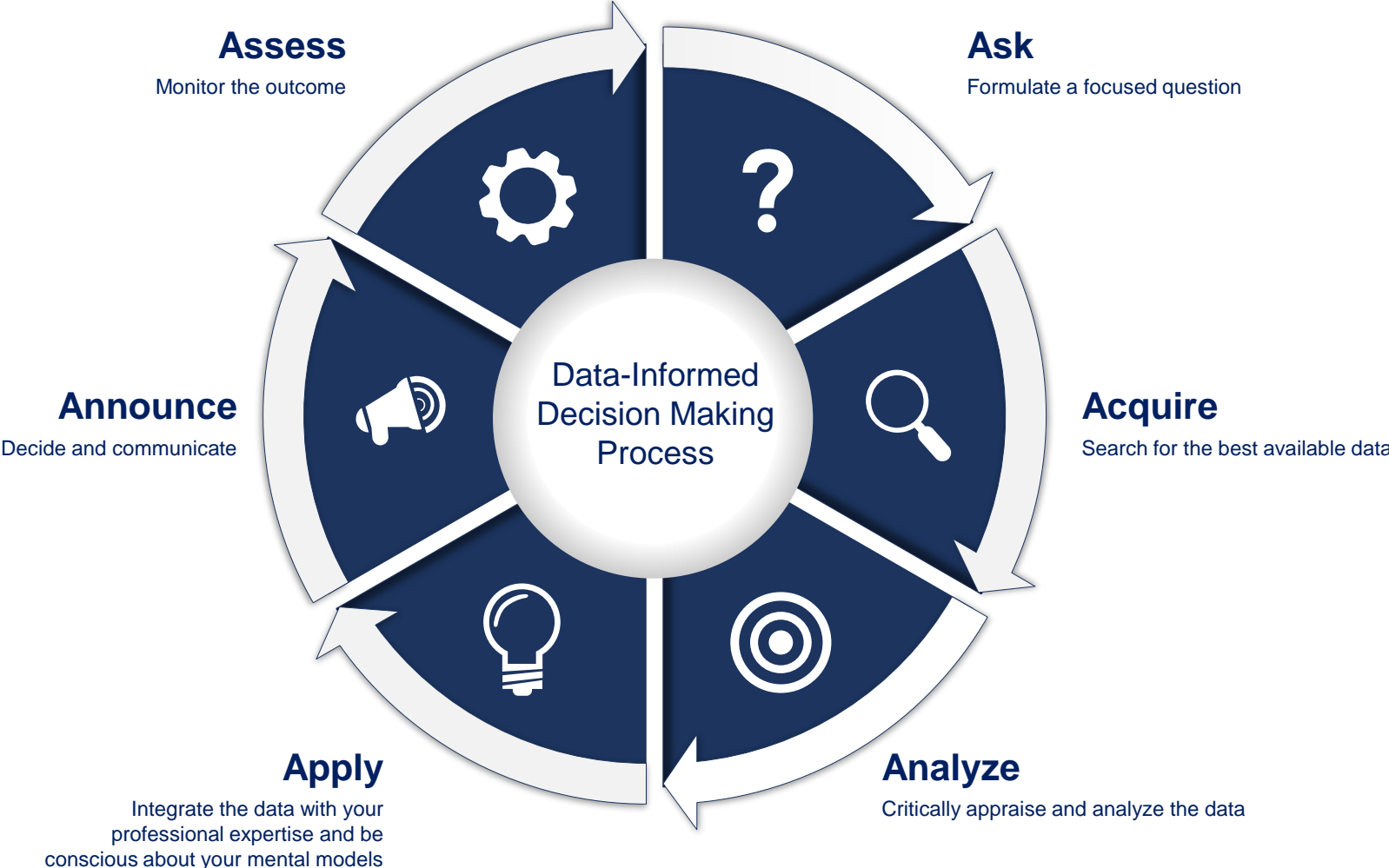Communicating with Data

Soft skills

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The Data-Informed Decision Making Ecosystem

*Data-Informed Decision Making is the ability to transform **information** into actionable and verified **knowledge** to ultimately make business decisions.*

Data-Informed Organization & Culture

Decision Making with Data

Systems Thinking	Critical Thinking with Data	Cognitive Diversity	Active Listening	Communicate with Data

Data Analytics and Evaluation

Descriptive	Diagnostic	Inferential	Predictive	Prescriptive

Data Strategy

Data Quality	Data Management	Data Governance

Data Literacy

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Data-Informed Decision Making Process

Assess
Monitor the outcome

Ask
Formulate a focused question

Announce
Decide and communicate

Data-Informed Decision Making Process

Acquire
Search for the best available data

Apply
Integrate the data with your professional expertise and be conscious about your mental models

Analyze
Critically appraise and analyze the data

Data-Informed Decision Making Methodology

Step	Questions
Ask	1. Turn the business questions into analytical question(s). 2. Classify the decision needed.
Acquire	3. Find and source all relevant data. Remember to think about the analytical questions systemically and to include any interrelated data that could be relevant. This means not only internal data but external data and information as well. 4. Ensure the sourced data is available, trusted, and in the right form (extracted, profiled, tagged, cataloged, standardized, treated for sensitivity, etc…).
Analyze	5. Create a measurement framework to describe your data with Key Performance Indicators and Descriptive Analytics. 6. Use diagnostic analytics to find patterns, trends, and relationships that may exist but not be obvious to start to drill into root cause. If applicable, leverage inferential statistics, predictive analytics, and prescriptive analytics.
Apply	7. Review and orientate yourself to the information and data so far, and apply your personal experiences to it. 8. Challenge the data and actively look for information to disprove it. 9. Leverage strategies to become aware of and to mitigate bias, and then make a decision.
Announce	10. Announce your decision at the right level to ALL stakeholders (direct, indirect, upstream, and downstream). 11. Provide adequate time for stakeholders to unlearn any outdated mental models and to learn new ones.
Assess	12. Set up a review mechanism to monitor the impacts of the decision after it is made and acted upon. Leverage that review mechanism, and fail/fix/learn fast, making improvements to data, measurement frameworks, accountability, decisions, and anything else upon.