



# Data Warehouse Analytics: Build vs Buy

Comparing benefits and drawbacks of building  
or buying data warehouse analytic systems

## Abstract

Data analytics is fundamental for business planning in today's changing corporate landscape, but investment, opportunity, and operations costs of building a data warehouse solution are high. For non-tech companies, buying a full-service analytic solution can provide enterprise-level decision making without creating another technical department.



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# ECLIPSE

by **analyticLABS**

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# What Can Data Analytics Do for Your Business?

Data analytics and cloud warehousing provide enormous benefits for predicting opportunity, planning for growth, and achieving business goals. Data analysis is decision-making power for innovative companies looking for a competitive edge; with the right analytic solution, raw information becomes action potential to manage everything from daily finances and HR to ecommerce expansion and supply chain shakeups.

## Plan for an Insecure World

Data-driven prediction through an analytic solution is a key factor in company stability and growth planning (Retail Council of Canada 2021). To meet the needs of today's fluctuating commercial environment,<sup>1</sup> previously sure ways of working and planning—like relying on industry predictions<sup>2</sup>—need to change; however, worldwide economic instability is also not a time to innovate without reliable business intelligence. Effective data analytics support intuitive planning to successfully adapt now and discover future possibilities.

## Understand the Whole Picture

A global economy requires global understanding. Modern businesses need a bigger picture than traditional reporting systems can provide to consider their entire competitive landscape, identify issues before they become problems, and accurately predict opportunity (Rollings 2021). Cloud warehouse analytics access more than transactional records and departmental data; by combining company-wide information with relevant data sources from across markets, industries, and environments, cloud warehousing increases the power and reliability of predictive models and comparative reports.

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<sup>1</sup> Recent fluctuations in the commercial environment that impact planning are demonstrated in example *The Daily* entries for late 2021 [retail trade](#) (Statistics Canada 2022) and the [Consumer Price Index](#) (Statistics Canada 2022).

<sup>2</sup> Unreliable industry predictions are demonstrated in [Canada's economic surprise](#) (Bharti 2021).

Table 2: Data Analytics Warehouse—Technical Considerations <sup>5</sup>		
Technology	Software	<ul style="list-style-type: none"> <li>• Application programming interface (<a href="#">API</a>)—to connect software, databases, and data</li> <li>• System programming and user interface (UI)—to turn data into accessible information</li> <li>• Online analytic processing (<a href="#">OLAP</a>)—to turn transactional data into analytic reporting</li> </ul>
	Hardware	<ul style="list-style-type: none"> <li>• Capacity, power, and speed—to meet business intelligence needs now and adapt in future</li> <li>• Servers (physical or cloud)—to store data used in analysis and make it easy to access</li> <li>• Databases—to store instructions (like API or OLAP) for the analytic system to operate</li> </ul>
Processes	Ingestion	<ul style="list-style-type: none"> <li>• Data sourcing/licensing—to identify and acquire external and internal information sources for analysis</li> <li>• Extraction, loading, transformation, transportation (<a href="#">ELT/ETL</a>)—to bring data into the warehouse and prepare it for analytic application</li> </ul>
	Storage	<ul style="list-style-type: none"> <li>• Data security—to keep non-transactional, confidential data safe, and comply with data laws</li> <li>• Warehouse and data maintenance—to ensure capacity, reliable connection to sources, and data useability (access, organization, validity)</li> </ul>
	Analysis	<ul style="list-style-type: none"> <li>• Analytic query design—to ask business intelligence questions in ways data can answer</li> <li>• Reports and visualization—to display analyzed data for business intelligence needs</li> </ul>

<sup>5</sup> Technical acronym explanations (linked in table) beyond the scope of this paper available through [IBM Cloud Learn Hub](#).

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