The modernization of the data warehouse

As every data warehouse professional can tell you, the data warehouse (DW) is today evolving, extending, and modernizing to support new technology and business requirements as well as to remain in line with competitive requirements in the age of big data analytics. This process has become known as data warehouse modernization, and it is driving hybrid and multi-platform architectures.

Every user organization and its DW is a unique scenario, so every modernization program is, too. From very few common situations, drivers, and outcomes, there arise (usually alternative) facts presented here are from the TDWI Best Practices Report: Data Warehouse Modernization in the Age of Big Data Analytics. Not all charts are to scale due to rounding or multiple answers.

SUCCESSFUL DW MODERNIZATION Requires & Strategy

1. Modern practices for self-service data exploration and data preparation
2. Greater capacity for growing data, users, reports, analysis
3. Business alignment, so the DW supports business goals
4. Technical performance of the warehouse
5. Real-time operations, based on fresh data
6. No strategy (although we do need one)
7. No strategy (because we don’t need one)
8. Replacement or up-grade primary platform
9. Replacement or up-grade primary platform
10. Moving to a platform agnostic approach

TOP BENEFITS OF DW MODERNIZATION

1. Better business decision making
2. Inadequate staffing for data warehousing
3. Poor stewardship or governance of data
4. Lack of experience with big data and analytics
5. Poor technical performance of the warehouse
6. Technical performance of the warehouse
7. Case of implementing new technologies without having implemented and validated new methodologies in the past
8. Lack of implementation of new technologies without having validated new methodologies in the past
9. Need to run the business on numbers and analytics
10. Positive business performance of the organization

At what pace is your data warehouse evolving?

1. Little or no relevance 2.39%
2. Somewhat relevant 15.76%
3. Relevant 81.85%
4. Strongly relevant 0.74%
5. Don’t know 0.87%

How modern is your data warehouse today?

1. Little or no modern 4.41%
2. Mostly modern 76.41%
3. Fully modern 19.44%
4. Don’t know 0.54%

How important is data warehouse modernization?

1. Not at all important 4.67%
2. Rather important 22.11%
3. Very relevant 71.22%
4. Don’t know 1.98%

What is the state of your DW business alignment?

1. Strongly aligned 7.67%
2. Closely aligned 40.00%
3. Somewhat aligned 45.36%
4. Poorly aligned 7.07%
5. Don’t know 0.87%

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INFOGRAPHIC

The data warehouse (DW) is today evolving, extending, and modernizing to support new technology and business requirements as well as to remain in line with competitive requirements in the age of big data analytics.

HYBRID ARCHITECTURES

Most modern data warehouses have multiplatform and hybrid architectures.

1. Central EDW with a few additional data platforms
2. Central EDW with additional data platforms
3. Central EDW with a few additional data platforms
4. No true DW, but a few additional data platforms instead
5. Multiplatform and hybrid architectures are now the norm for modern DWs.

TOP BARRENES TO DW MODERNIZATION

1. Technical performance of the warehouse
2. Lack of implementation of new technologies without having validated new methodologies in the past
3. Need to run the business on numbers and analytics
4. Poor technical performance of the warehouse
5. Case of implementing new technologies without having implemented and validated new methodologies in the past

The monolith was the norm in the 1990s. It’s now rare and declining.

1. Single monolithic data warehouse 15%
2. Central EDW with additional data platforms 16%
3. Central EDW with a few additional data platforms 15%
4. Multiplatform and hybrid architectures are now the norm for modern DWs 37%
5. Other 15%