Lightweight DWH Data Analysis for SMEs

Lukas Dötlinger, Manuel Penz, Markus Reiter & Stephanie Widauer

University of Innsbruck, Innsbruck, Austria

Outline

- Motivation
- Methodology
- DWH Needs for SMEs
- Review of DWH Services
- Interim results

Motivation

- Increasing digitisation results in collection of more data
- SMEs are more commonly using digital systems
- They therefore need a proper way to organise their data

Methodology

- Determine the specific needs for a DWH
- Summarise key factors and challenges

Methodology

- Research for different DWH solutions targeted at SMEs
- Comparison and classification of those systems
- Check of suitability for SMEs

DWH Needs for SMEs

• Heavy reliance on spreadsheets

• growing number of spreadsheets across multiple departments is unmanageable combining them all together

Overwhelming spreadsheets

• spreadsheets can reach the point where no data can be added anymore

Takes too much time to wait

• one spreadsheet per department means other employees have to wait for the newest version

DWH Needs for SMEs (contd.)

• Discrepancies on data and reports

 different third party information in every department's spreadsheet could lead to data discrepancies after combining all together

Too much time invested in creating reports

 auto update the DWH System after data in sources changes – departments can rely on always correct up to date Data

Review of DWH Services

- Software as a Service (SaaS) / Data Warehouse as a Service (DWaaS)
 - · cost-effective pay-as-you-go model
 - straightforward setup
 - no hardware necessary, can be deployed instantly
- Review & Comparison of DWaaS Products
 - What do they have in common?
 - · How do they differ?
 - Are they suitable for small businesses?

Interim Results: DWH Services

Services we found so far:

- Bime Analytics
- Panoply
- Stitch
- Vertica
- Segment
- Xplenty

- Tableau
- Snowflake
- AWS Redshift
- Google BigQuery
- IBM DB2