BIG BELARUS DATA. THE YEAR OF TRUTH FOR BELARUS, BIG DATA AND ANALYTICS

M. G. STROO, PhD
Owner of Invisi, Netherlands, Owner of Act
On Insight, Belarus, Information Innovation
Leader, Business Intelligence Consultant:
Royal Agio Cigars, City of Rotterdam, Nuon

Invisi BV, Netherlands

Analytics Maturity - Crawl Before You Run

- People first learn to crawl, then to walk, then to run

- In analytics maturity, first learn to see what happened, then why did it happen, then what may happen:

  - Reporting and scorecarding

  - Dashboarding and OLAP

  - Forecasting and Predictive Analytics

- First look inwards to your structured process data, then deal with larger amounts of more varied customer and market data

Data Science As Business Innovation Driver

- Companies also possess more and more customer data

- This customer data can be analysed for patterns and trends

- Once Data Mining, now Data Science, is how data is analysed for valuable insights

- Open source tools and software languages like R and Python bring Data Science within reach of many

- This may lead to product and process innovation even for smaller companies

Innovative Business Models to Turn Data Into Profit

- Data generated by your business processes can be used as new products or services

- This data goes from a byproduct of the process to the centre of a new product

- The new products can open up new markets and new clients

- These products typically follow one of a couple of basic patterns

Data Driven Product Patterns

- Sell data

- Innovate products through data

- Swap commodity offerings into value-added services

- Create interaction in the value chain

- Create a network of value based on data exchange

Sell Data Example

- Bank analyses account transactions with specific retailers

- Bank anonymises this data

- Bank benchmarks this data with selected competitors

- Bank sells the result to these specific retailers

Product Innovation Example

- Bank offers checking accounts to consumers

- Bank offers household expenses dashboard to their consumers based on their account transactions

- Bank offers this dashboard also to non-customers who can upload data from their own bank

- Bank offers recommendations based on comparisons, such as energy spending compared to similar households

Data Driven Issues To Consider

- These issues may have limited impact on the original process, but big impact on your data driven product:
  - Data quality
  - Data continuity
- Interference with other processes

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The State of Big Data and Analytics in Belarus

- Large software services companies in Belarus with data related professionals largely ignore Belarus market
- Middle and large private Belarus companies are seen as having low budgets and limited interest for analytics
- State controlled Belarus companies are seen as not interested in analytics, business performance management and not thinking value driven

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Overcoming Belarus BI Challenges

- Increase numbers and level of data related and analytics professionals in Belarus
- Reduce knowledge drain of high potentials to other countries
- Use Agile project methods to rapidly implement BI in Belarus state and private companies
- Use innovative methods and tools to decrease development time of data warehouses
- Implement standard and conformed logical data models for core business processes for fast insight in areas like finance, sales and production

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Overcoming Belarus BI Challenges

- Use open source and low cost tooling as backbone of an analytics architecture
  - Database
    - PostgreSQL, MariaDB, MongoDB
  - ETL and data warehouse automation
    - Pentaho, Talend, Quipu
  - BI server, visualisation and OLAP
    - Pentaho, Jaspersoft, Palo
- Improve on existing open source tooling and create new ones from joint Belarus university and enterprise research

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Belarus Data Innovation Opportunities

- Reserve budget for data related research and innovation
- Review current internal business and customer data
- Start data warehouse projects in Belarus companies
- Start exploring innovation based on existing company and customer data
- Start Smart City initiatives in major Belarus cities

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Belarus Data Research Opportunities

- Effectiveness of various visualisation options
- Data virtualisation
- Data Warehouse automation
- Data Lake and Data Warehouse architectures
- Hadoop based Data Warehousing

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Belarus Data Challenge

- Bring Business Intelligence and Data Warehousing to one hundred medium sized Belarus companies per year

- Bring Data Science initiatives to ten larger Belarus companies per year

- Create hundreds of new Data related Belarus jobs per year

- Transform three Belarus companies to data centred companies per year