THE APPLICATION OF BUSINESS INTELLIGENCE 3.0 CONCEPT IN THE MANAGEMENT OF SMALL AND MEDIUM ENTERPRISES

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Agenda

1. Introduction
2. Short review of BI paradigm evolution – from „1.0“ to „3.0“
3. BI 3.0 defined
4. BI 3.0 and SMEs management
5. Conclusions

Introduction /1

- Todays business world puts more and more pressure on firms => maintain their competitive advantage
- Catalysts:
  - Adoption of new business practices (even unorthodox)
  - Resurrect old/polish currently used ones
- And support them with proper (and sophisticated) ICT means and information systems

Introduction /2

- The paper‘s focus = ICT means => innovative category of BI tools (BI 3.0) => perceived as software holding great potential with regard to gaining competitive advantage (Gartner, Forrester)
- Paper also focuses on SMEs:
  - As important source of economic growth and employment of ICT professionals
  - From the perspective of possible benefits when leveraging the BI 3.0 to gain competitive advantage

Short review of BI paradigm evolution – from „1.0“ to „3.0“ /1

BI 1.0

- 1970 – Management Information Systems – concept of static reporting, mainframe
- 1985 – Executive Information Systems – analytical functionalities, preformatted dashboards

BI 2.0 (main change driver = WYSIWYG)

- 1990 - „invention“ of the notion BI
- Continuing growth of EIS concept usage
- New fields of interest: data integration, data governance, data quality, web services, SaaS
- Real-time access to analytical information and robust BI tools

Short review of BI paradigm evolution – from „1.0“ to „3.0“ /2

Perceived shortcomings in traditional BI:

- lack of complete intuitiveness,
- lack of ability to get context of information beyond traditional structured data seamlessly (external + internal + unstructured data),
- lack of ability to get data highly relevant to one’s job requirements,
- lack of intuitive and collaborative functionalities integrated in the BI tool (social features)

BI 3.0 defined

- General feeling – even analysis should be collaborative effort
- Common sense – analytics should go beyond reliance on structured data available in internal sources
- Also external, mostly unstructured data in various formats should be used (social media posts, free form web content, images and video files, …)

Characteristics of next generation - BI 3.0 - tools

To fully support philosophy of the BI 3.0 the BI tool should be:

- proactive,
- real-time,
- integrated with business processes,
- operational (be available even to line workers),
- extended to reach beyond boundaries of the organization (to suppliers, partners, customers, government agencies)

The desired behavior of BI 3.0 tool (prerequisites for characteristics)

- **BE social** (power of collective intelligence + social-network-like functionalities in BI tool's interface + discussion based analytics = search of information and collaboratively create insights and analytical reports)
- **BE relevant** (automatically deliver relevant insights that users really need according to their situation and user profile)
- **BE fully self-service** as a critical feature (intuitiveness and literally no instruction manual needed + robustness and richness of analytical functionalities)

PANORAMA
Hi Allen | Logout
search workspace
1-8 of 39
Cherrie LeBlanc
Mike Zienski
James Madden
Melanie Watson
Cherrie LeBlanc
Larry Brown
Sarah Gross
Daniella Popovich
Welcome - Margin Exceptions
Filtered by: USA Cost Store Q3 FY 2009
10
filter
by name
Weekly Performance | 3
Geographic evaluation | 21
Bike stores | 6
Margin Exceptions | 0
Allen Jones, James Madden
Hey James, what's going on here? I was analyzing the third quarter results when noticed a severe Margin problem in the bikes category. Please explain.
Add to Discussion
Accessories | 5
Employee of the month | 3
New products | 52
Global operations | 4
Sales | 10
Corporate workflow | 5
Top Ten Customers
1 2 3 4 5 6 7 8 9 10
Margin Threshold
0%
50%
100%
Operations
Gross Profit Margin
Value: 15.10% Goal
Commerce
Gross Profit Margin
Value: 2.60% Goal
Margin Exceptions
Values
Product Model Categories
Margin %
Accessories
19.30%
Bikes
-4.23%
Clothing
32.80%
Components
10.36%
Finance
Gross Profit Margin
Value: 7.50% Goal
USA
Asia
Europe
Accessories
Components
Clothing
Bikes

BI 3.0 and SMEs management /1

- **Social behavior** – the concept of social network (social media site) is well known and understood
- Possibility for SMEs to analyze competition, customers and co-working SMEs in a *familiar environment* (social-media-like functions + discussion and collaboration = rich and intuitive access to analysis capabilities)

BI 3.0 and SMEs management /2

- **High relevance behavior** – elimination of outcome volatility from time-consuming search for and collection of data for further analysis (cumbersome work even for a large company)
- Along with **real-time** manner of function = important decision-making tasks carried out without the need for rigorous verification of information and its relevance

BI 3.0 and SMEs management /3

- **Self-service behavior** as a critical feature = no instruction manual needed + intuitive interface = overcome aversion to BI mainly due to the need of extensive learning how to use new software (while they still struggle with Microsoft Excel)
- Training costs are commonly high => self-service can lower training costs and make the BI tool more affordable for SMEs (strained budget)
- Self-service enables **operational** manner of BI

BI 3.0 and SMEs management /4

- **Integration into business processes –** tough question of whether the SME is managing its business processes in some standardized way
- **Integration and extension of BI** (to external organizations, partners, government agencies etc.) – e.g. monitor regulations and law enforced standards or competitors' actions (web + social media)

Threat when adopting BI 3.0 - problem of information ownership and security

- Companies often work with information publicly available on the Internet = copyright and personal information security regulations
- Law enforced penalties for breaking general rules of personal and public information handling => destructive for any business (not only SMEs)
- BI 3.0 software provider should point this out in the first line
- Also company should adopt some processes for information security and usage ethics (or use software means = possible drawback)

Conclusions

- BI 3.0 = new generation of BI software that embraces social features, enforces high relevancy of information (+ proactivity + real-time access + integration with external subjects) and intuitive self-service interface (+ operational usage)
- SME can leverage its features (characteristics) to gain competitive advantage (+ mobile platforms and SaaS = synergy effect) with possibly lower budget (compared to traditional BI)
- Integration into business processes = possible source of problems while adopting BI 3.0
- Information security and sharing ethics should be taken care of

Thank you for your attention

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