Gold. It's a rare metal and one of the earth's most valuable and sought-after raw materials.

Smart Data @ BW Bank

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16. March 2017
Agenda

1 Company Profile

2 Project Smart Data

3 Extract of implemented Use Cases
   3.1 Migration of Legacy Propensity Models
   3.2 Segmentation of Customers' Digital Tendencies
   3.3 Text Mining – RSS Integration (Newsfeeds)
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Regional Customer-Driven Bank.

Data and facts

- Head offices: Stuttgart, Mainz, Karlsruhe, Mannheim
- Employees in the Group: > 10,000
- LBBW offices across Germany: > 200
- LBBW offices around the world: 19

Private customers
- Multi-channel bank: branch supplemented with online and telephone banking, apps and video-based advisory services

Private banking
- Strategic and comprehensive advice
- Special competence with freelancers and caring professions

Wealth Management
- Assistance with large assets and complex structures
Digital is changing Retail Banking customer experience.
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From Database Marketing to Smart Data.
Rapid Deployment - Implementation within 3 months.
The role of AAA within the Smart Data Project.
Architecture.
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3.3 Text Mining – RSS Integration (Newsfeeds)
Migrating more than 20 Models to KNIME.
3.1 Migration of Legacy Propensity Models

Cassandra and KNIME.
3.1 Migration of Legacy Propensity Models

Cassandra and KNIME.
3.1 Migration of Legacy Propensity Models

New nodes by AdvancedAnalytics.Academy
3.1 Migration of Legacy Propensity Models

Cassandra and Spark and KNIME.
Yes, they blend! Communication between Cassandra, Spark and KNIME.
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Traditional (offline) Customer Segmentation approaches are missing the point.
3.2 Segmentation of Customers’ Digital Tendencies


Representative Sample of BW Bank Customers
- Sample for Customer Survey

Customer Survey: 2,500 Outbound Calls
- “Are you using our digital touchpoints?”
- “When do you use them?”
- “Are you happy with them?”

Customer Segmentation of survey participants
- High Digital Tendencies
- Mid Digital Tendencies
- Low Digital Tendencies

Transfer to BW Bank Customer Population
- Semi-Supervised Learning Algorithm implemented as a KNIME Node
- Digital Tendencies of each BW Bank customer allocated

Customer Survey:
- 2,500 Outbound Calls
- “Are you using our digital touchpoints?”
- “When do you use them?”
- “Are you happy with them?”
3.2 Segmentation of Customers’ Digital Tendencies

Graph-based Semi-Supervised Learning.

1. Perform unsupervised learning on the unlabeled data.
2. Label propagation algorithm propagates the labels to surrounding unlabeled customers.
3.2 Segmentation of Customers’ Digital Tendencies

Semi Supervised Learning.
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3.3 Text Mining - RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.
Connecting Newsfeeds to Customers.

### 3.3 Text Mining – RSS Integration (Newsfeeds)

![Image of RSS integration diagram]

**Dialog - 0:1 - Table Creator (RSS Feeds to collect)**

- **Input line:**
  - **URL:** http://www.faz.net/rss/aktuell/finanzen/
  - **AUTHORS:** FAZ
  - **CATEGORY:** Finanzen
  - **COLLECT_FLAG:** Y

- **URL:** http://www.faz.net/rss/aktuell/wirtschaft/
  - **AUTHORS:** FAZ
  - **CATEGORY:** Wirtschaft
  - **COLLECT_FLAG:** Y

- **URL:** http://rss.sueddeutsche.de/wirtschaft
  - **AUTHORS:** Sueddeutsche
  - **CATEGORY:** Wirtschaft
  - **COLLECT_FLAG:** Y

- **URL:** http://rss.sueddeutsche.de/gesetze
  - **AUTHORS:** Sueddeutsche
  - **CATEGORY:** Geld
  - **COLLECT_FLAG:** Y

- **URL:** http://rss.focus.de/finanzen/
  - **AUTHORS:** Focus
  - **CATEGORY:** Finanzen
  - **COLLECT_FLAG:** Y

- **URL:** https://www.welt.de/feeds/section/wirtschaft.rss
  - **AUTHORS:** Welt
  - **CATEGORY:** Wirtschaft
  - **COLLECT_FLAG:** Y

- **URL:** https://www.welt.de/feeds/section/finanzen.rss
  - **AUTHORS:** Welt
  - **CATEGORY:** Finanzen
  - **COLLECT_FLAG:** Y

- **URL:** http://www.spiegel.de/wirtschaft/index.rss
  - **AUTHORS:** Spiegel
  - **CATEGORY:** Wirtschaft
  - **COLLECT_FLAG:** Y

- **URL:** http://www.capital.de/partner-feeds/rss.xml
  - **AUTHORS:** Capital
  - **CATEGORY:** Allgemein
  - **COLLECT_FLAG:** Y

- **URL:** http://deutsche-boerse.com/dbg-de/2531518/listFeed
  - **AUTHORS:** Deutsche Bo…
  - **CATEGORY:** Allgemein
  - **COLLECT_FLAG:** N

- **URL:** http://wallstreetonline.de/rss/nachrichten-aktien-indizes.xml
  - **AUTHORS:** Wallstreet O…
  - **CATEGORY:** Aktien und In…
  - **COLLECT_FLAG:** Y

- **URL:** http://wallstreetonline.de/rss/nachrichten-chartanalysen.xml
  - **AUTHORS:** Wallstreet O…
  - **CATEGORY:** Chart
  - **COLLECT_FLAG:** Y

- **URL:** http://wallstreetonline.de/rss/board-dax.xml
  - **AUTHORS:** Wallstreet O…
  - **CATEGORY:** Dax
  - **COLLECT_FLAG:** Y

- **URL:** http://www.de/kontaktexport/feed/rss/aktuell.xml
  - **AUTHORS:** Wirtschaft, Unternehmen
  - **CATEGORY:**
  - **COLLECT_FLAG:** Y
3.3 Text Mining – RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.
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Connecting Newsfeeds to Customers.

RSS-FEEDS ➔ ORGANIZATIONS

CLIENTS AND THEIR INVESTMENTS ➔

TEXT PREPROCESSING ➔

TERM TAGS & TAG CLOUD ➔

TAG ORGANIZATIONS ➔
QUESTIONS?
Thank you for your attention!