KNIME UGM 2014 – Partner Session

DYMATRIX Customer Intelligence Solutions

Stefan Weingaertner – DYMATRIX CONSULTING GROUP
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Company Introduction
» **Solution provider** for analytic CRM, Customer Intelligence, Marketing Automation and Campaign Management (‘regular’ and big data)

» Focus on **customer insights**, based on best of breed technologies for **revenue acceleration** and **marketing efficiencies**

» Recent expansion into **industrial analytics**

» **Project execution excellence** proven in **900 projects** with mid- and large cap companies from a variety of industry sectors

» Successful development and deployment of unique **analytics automation** software products - for **precision**, **reliability** and **scalability**

» Owner managed and independent
DYMATRIX - Analytics is the Differentiator

» More than **300 man-years** analytics/data mining consulting and solution deployment across all industries

» Expertise with most of the **market-leading advanced analytics tools**
  - KNIME
  - SAS Enterprise Miner
  - IBM SPSS Modeler
  - R
  - Hadoop Mahout
  - Angoss Knowledge Studio
  - MS SQL Server Analysis Services
  - many more...

» Cutting edge analytical solution offerings (DynaMine & DynaCision)

» Focus on **embedded analytics** (process integration) and **analytics automation** (DYMATRIX-solution DynaMine)

» Big Data Analytics Pioneer

» Comprehensive offering of training courses (tool-independent & tool-specific trainings)
Product Portfolio – The Customer Insight Suite

Analytics ➔ Insights ➔ Automation ➔ Results

DynaCampaign
» Intelligent multi-channel campaign planning, target group selection and response measurement
» Integration of all historical and current online and offline data

DynaMine
» End2end automation of data science processes
» Intelligent model management for automation of preprocessing, training & scoring of models

DynaSocial
» Identify and quantify customer reviews, requirements and needs

DynaCision
» Intelligent real time decision models
» Credit limit controlling, next best offer, churn prevention etc.
# References

## Telecommunication
- 1&1
- canty
- unitymedia
- mobilcom-debitel
- T...
- simyo
- vodafone

## Travel, Transportation
- 1&2 Fly
- airtours
- ARKONA
- berge meer
- COMJEL
- GLAM MAGIC LIFE
- e-domizil
- e-hoi
- e-kolumbus
- Europcar
- FTL Touristik
- fly.de
- ferien.de
- Flughafen Zürich
- Hapag-Lloyd Kreuzfahrten
- HRS
- OBB
- ROBINSON
- SSB
- sonnenklar TV
- SIXT
- TUI
- Vänge
- VGF
- VIKING
- VOGEL-Reisen
- WAGNER
- WEGNER
- WEGNER Reisen
- Walbusch
- Which

## Retail / e-Commerce
- artedona
- ADLER
- BUTLERS
- bofrost
- bremen verlag
- BSW.
- breuninger
- Continental
- CONLEY'S
- DISCOVERY
- DEHOP
- ESPRIT
- Happy!Size
- HSE24
- IKEA
- LAX
- Tschumi
- CASINO LUZERN
- KLINTEL
- Loyalty Partner
- qvc
- Peter Hahn
- Profi
- Schaefer
- Verkauf
- Weltbild.de
- WeightWatchers
# References

## Banks, Insurances

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## Media & Entertainment

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## Utilities, Industry

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## Public Sector

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DYMATRIX Customer Intelligence Offering
Customer Intelligence Excellence

» KNIME Solution Nodes

- DYMATRAX Customer Intelligence
  - DYMATRAX Binning
    - Advanced Discretization
    - Advanced Discretization (Apply)
    - Nominal Binner
  - DYMATRAX Scorecard Modeling
    - Scorecard Builder Interactive
    - Scorecard Builder Simple
    - Scorecard Evaluator
    - ScorecardApply
  - Model Comparison
    - DYMATRAX Uplift Modeling
      - Uplift Tree Evaluator
      - Uplift Tree Learner
      - Uplift Tree Predictor

» DYMATRAX CI Solutions
  (KNIME Services under the hood)

- DYNAMINE
- DYNACAMPAIGN
- DYNACISION
- DYNASOCIAL

KNIME
Our KNIME Solution Nodes & KNIME Consulting Services

+ Analytical Consulting
+ Technical Consulting
+ Node Development
+ Trainings

**PMML2SQL / PMML2SAS Converter**
- Convert PMML to executable SQL Code for In-Database-Scoring
- Convert PMML to executable SAS Code for Model Scoring within SAS

**Uplift Modeling**
- Train a predictive model that predicts the incremental response to marketing actions
- For up-sell, cross-sell, churn and retention activities

**Interactive Scorecard Builder**
- Powerful interactive Scorecard Building Nodes for Design of Credit or Marketing Scorecards
- Comes with Interactive Binning Nodes for both interval and nominal inputs
- Supports PMML 4.1 including Reason Codes
PMML2SQL / PMML2SAS Converter
PMML2SQL / PMML2SAS Converter

Export PMML, SQL or SAS Scorecode
Uplift Modeler
Uplift modelling uses both the **target group** and **control group** to train a predictive model that focuses on the incremental response.

- The only segment that provides true incremental responses is the **Persuadables**
- The Uplift Tree Modeler provides a modeling technique that can **separate customers into the 4 segments**
- Traditional response modelling often targets the **Sure Things** being unable to distinguish them from the **Persuadables**

By only targeting the **Persuadables** in an outbound marketing campaign, the contact costs and hence the return per unit spend can be significantly improved.
DYMATRİX Uplift Tree Nodes

1. **Uplift Tree Model**

   - File Reader
   - Data Preprocessing
   - Partitioning
   - Column Filter
   - Uplift Tree Learner
   - Uplift Tree Predictor
   - Auto-Binner
   - Uplift Tree Evaluator
   - Histogram (interactive)

2. **Validate Uplift Tree Model**

3. **Export PMML, SQL or SAS Scorecode**

   - Tree-PMML2SQL
   - Convert PMML to SAS Code
Interactive Scorecard Builder
Scorecards - the idea behind

» Scorecards represent a **powerful** and **easily interpretable** formulation of predictive models, originated in retail banking to estimate and rank-order consumer credit risk

» As a generalized additive model using **binned representations** of its input fields, the scorecard formulation is also frequently used to predict other types of binary and continuous outcomes:
  - marketing response
  - churn prevention
  - fraud detection
  - revenue potential
  - and many more...

![DYMATRAX Interactive Scorecard Builder](image-url)
Interactive Scorecard Builder in a Nutshell

» The Interactive Scorecard Builder comes with 7 KNIME Nodes
  - Nominal Binner (Based on WoE)
  - Nominal Binner Apply
  - Advanced Discretization (sophisticated Numeric Binner based on WoE)
  - Advanced Discretization Apply
  - Scorecard Builder
  - Scorecard Apply
  - Scorecard Evaluation

» Consequently supports PMML 4.1 Scorecard Standard for platform independent batch or realtime scoring (http://www.dmg.org/v4-1/Scorecard.html)

» Many more features integrated
  - Reason Codes
  - Subsequent manual adjustments of scorecards
  - Scorecard-versioning to satisfy requirements for documentation
  - ...

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Interactive Scorecard Builder - Workflow

1. Interactive Binning of nominal Inputs based on Weight of Evidence (WoE)

2. Interactive Binning of Numeric Inputs based on Weight of Evidence (WoE)
Interactive Scorecard Builder - Workflow

Interactive Scorecard Builder
- Configure Scorecard (Base Points, Base Odds, Points to double the odds etc.)
- Edit Score Points
- Edit Reason Codes
Interactive Scorecard Builder - Workflow

KS Statistic to evaluate Scorecard Accuracy
# DYMATRIX Interactive Scorecard Builder

Deployment in Zementis ADAPA

## ADAPA 3.6.1

### Score/Classify Data

**Select Model**: KNIME_SCORECARD

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Thank your for your attention.
Please contact us for further questions!