Paddy Power at the KNIME UGM
Bet Responsibly. On your CRM too

Walter Bonifazi - Berlin, 25 February 2015
Agenda

- Paddy Power
  - KNIME in Paddy Power Italia
  - Use case: Bet Responsibly. On you CRM too
Paddy Power, who we are

The Beginning

- Founded in 1988 in Dublin
- Merge of 3 Irish bookmakers

Now

- More than 4,000 employees
- 2013 Net Revenues: €745M
Paddy Power: Innovative
Paddy Power: Mischief

Let’s make things more interesting.
Paddy Power: Strong performance

Share Price - William Hill, Ladbrokes, Paddy Power

Source: deconstructingrisk.com
I think that...

Data say...
May 2012 – Website launched in Italy: only sports betting
Paddy Power Italia - Poker

June 2014 – Poker

GIoca a Poker e Scala le Classifiche Cash Settimanali
Montepremi 1.750€

SCOPRI ORA

1 SCARICA  2 REGISTRATI  3 GIOCA  SCARICA E GIOCA
Paddy Power Italia - Bingo

November 2014 – Bingo
Agenda

- Paddy Power

- KNIME in Paddy Power Italia

- Use case: Bet Responsibly. On you CRM too
KNIME is our main data analytics platform
Complex operations are managed automatically and efficiently with KNIME

- CRM automation
- «Real time» data management
- Models and algorithms (segmentations, campaigns)
- Complex analysis
- Reports
- Weapon to innovate (fancy Marketing ideas)
KNIME users Paddy Power Italia

KNIME Analytics Platform
- Insights Team
- CRM Teams
- Operations Teams

KNIME Server
- Insights Team
- Business Intelligence Team

KNIME Web Portal
- Management
- Marketing Managers
- Online Marketing Team
Agenda

- Paddy Power
- KNIME in Paddy Power Italia
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Bet Responsibly. On you CRM too

Before: ROI analysis

- Look for the CRM campaign data (.xls file)
- Analyze the campaign
- Give the results
- Manual work
- Few campaigns analysed
- Need to wait some days

Now: ROI Dashboard

- Save each CRM campaign with a simple form
- Just look at the automated dashboard
- All automated
- All the campaigns in the dashboard
- Data updated every day
The ROI dashboard – the engine

- Iteration
- Output
- Input

CRM

• Load
• Input

ROI engine

• Input

Business
The ROI dashboard – the flow

Read Data

- CRM Data: Campaign lists with Control Group
- Business Data: Customer activity

ROI machine

- Outlier detection
- Uplift calculation
- Reliability Index

Dashboard

- Data Mart
Outlier detection with KNIME

When your data are too big?

- **Objective**: Identify outliers (with no assumption on distribution)

- **Solution**: Identify a threshold based on the values of the overall population

- **Technique**: Box-Whiskers statistics
  - Smoothing of the values if too much over-spread
    - Logarithmic transformation
  - Threshold based on the upper projection the inter-quartile interval
    - If the value is over the threshold -> The value is an outlier
ROI reliability index with KNIME

How consistent is your ROI?

• **Objective:** Identify if the ROI is reliable

• **Solution:** Simulation of a ROI distribution in order to analyse his dispersion

• **Technique:** Bootstrap re-sampling
  - Repeated simulation of Target and Control Group of given size
  - ROI calculation for each simulation
  - Standard deviation of ROI distribution
    - If the distribution is normally spread -> ROI is reliable
    - If the distribution is over-spread -> ROI is not reliable
The ROI Dashboard – Output

How does the ROI Dashboard look like

<table>
<thead>
<tr>
<th>Row Labels</th>
<th>#Target</th>
<th>%Act_Targ_2W</th>
<th>%Act_CG_2W</th>
<th>Cost</th>
<th>Uplift_2W</th>
<th>ROI_2W</th>
<th>AMI_2W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campaign 1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sub Campaign 1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>89</td>
<td>31.5%</td>
<td>10.0%</td>
<td>€300</td>
<td>€248</td>
<td>17.3%</td>
<td>1.10</td>
</tr>
<tr>
<td>Tier 2</td>
<td>487</td>
<td>25.3%</td>
<td>16.7%</td>
<td>€450</td>
<td>€1,018</td>
<td>126.1%</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Future: The ROI Dashboard in the KNIME Server web portal!