Pricing – New Opportunities
The P&V Group

1. Since our foundation in 1907, our credo is to make insurance accessible to as many people as possible
2. Our focus is exclusively on the Belgian market
3. Through different brands, we offer a large range of insurance solutions to individuals, self-employed persons, companies, institutions and the public sector
4. We are a multi channel company: Tied Agents, Brokers and Direct
5. We are active in P&C, Life and EB
In an area of change

**Climate change** with impact on costs and frequency (Irma, Harvey, …)

Usage of **sensor** in Automotive, Home & Health with impact on product & service offering

With **Big data** we are able to assess more accurately the risks with impact on pricing and underwriting

**New industry players.** To survive and thrive in the digital age, insurers will need to be more agile, factoring in the shift in distribution channels and becoming more collaborative in revenue planning.
With major technologies changes

- Internet of Things Platform
- Machine Learning
- Smart Homes
- Autonomous Cars
- Blockchain
- Virtual Assistant
- Cognitive expert Advisors
- Low-cost sensors & wearables
- 4D Printing
- ...

Note: Paas = platform as a service; UAVs = unmanned aerial vehicles

Source: Gartner (July 2017)
And new customer behaviors

- Multi-channel
- Digital
- Social Media
- E-Commerce
- Customer Zone

### Impacting the Insurance Value Chain

<table>
<thead>
<tr>
<th>Attract</th>
<th>Quote</th>
<th>Contracting</th>
<th>Claim intake and handling</th>
<th>General servicing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consult information</td>
<td>Get advice</td>
<td>Ask specific product information</td>
<td>Purchase a new product</td>
<td>File a claim</td>
</tr>
<tr>
<td>27%</td>
<td>22% 23%</td>
<td>27% 29%</td>
<td>23% 21%</td>
<td>24% 24%</td>
</tr>
</tbody>
</table>


Increase of the impact of digital enable us to revisit/rethink our Value Chain. Face2Face remains important for some steps of the Value Chain.
More data will be created in 2017 than the previous 5,000 years of humanity.
With impact on insurance profitability... and opening new opportunities

Bron: Gartner, G00289755 - Hype Cycle for Emerging Technologies, 2015
New opportunities in terms of pricing ... but also a threat

- Ability to design usage-based and innovative pricing models
- enable to estimate risk or consumer willingness to pay, buy, or churn more accurately
- Enable to identify consumer with higher risk or higher probability to commit fraud

Insurers that do not recognize that will

- quickly lose competitive edge to rivals that better understand what is driving their clients’ needs and willingness to pay
- eventually end up with a larger pool of relatively riskier and less profitable clients.

- negatively impact profitability and, ultimately, market share.
New opportunities in terms of Value Proposition

1. **Personalisation of insurance policies**
   - Connected devices allow insurers to track and continuously refine individual risk profiles with empirical data, enabling more accurate underwriting of individual risks.
   - Furthermore, connected devices enable a channel for consumers to purchase event-based coverage to personalise their policies for better protection.

2. **Active management of the insured’s risks**
   - Connected devices create a bilateral channel for insurers to interact more frequently with their customers and proactively get involved in managing their customers’ risks (e.g., health consultation based on data gathered through wearables).
   - By developing ‘concierge’ functions, insurers can actively manage their client’s risk, lower losses and deliver additional value to customers.

3. **Broker of personal data**
   - Connected devices allow insurers to gather ongoing behavioural data from their customers to gain a fuller view of customer identity and lifestyle.
   - Working with retailers and other external parties, insurers use the increased knowledge on their customers to deliver relevant, financially beneficial information (e.g., offers).

Source: WEF – Final report 2015
Example 1: Pay As You Drive

- New pricing variables
- New services
- New opportunities to contact the consumer

Insurance Product
- Usage Based Pricing (PAYD)
- Discount on other coverages (theft)

Rewards & Incentive
- Rewarding Safe driving behaviour
- Engaging and gamified touchpoints

Services & Support
- Mobile or automatic access to assistance
- Anti Theft and Car Finder
- Mobile access to Contact Center
- Claims FNOL and follow up
- Fuel efficiency recommendation
- Car Maintenance services

Community
- Community
- Discount Partnerships (Gas stations, travel agency,...)
Example 2: Dynamic Pricing

P&V website/portal

1. Input data:
   - Product
   - Service
   - Registration nr
   - Date of birth
   - Years no-claim
   - Kilometers
   - Zip code
   - Address

2. Rating engine

3. Define customer value
   - Customer Lifetime Value
   - Propensity to Lapse

4. Define real-time competitive position

5. Calculate premium adjustment

6. Adjusted premium
   - Customer / Broker / Agent accepts / adjusts / rejects

7. Final premium

Dynamic pricing module

Customer value

- Current premium

Market position

- C1: €77.1
- C2: €90.4
  - e.g. dinex

Hybrid model

1. Customer

2. Rating engine

3. UBI

4. Reference premium

5. Premiums, promofactors, responses & A/B-testing

P&V website/portal

6. Customer interaction

7. Pricing interaction

Broker/Agent

1. Customer

2. Rating engine

3. UBI

4. Reference premium

5. Premiums, promofactors, responses & A/B-testing

P&V website/portal

6. Customer interaction

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Input data

- Product
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- Zip code
- Address
**Example 2: Dynamic Pricing**

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Pricing goal</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3</strong> Customer value</td>
<td>Define commercial approach and maximum range of adjustment</td>
<td>Categorize customers based on their value, to support differentiation in commercial approach</td>
</tr>
<tr>
<td>- Current premium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- CLV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- P2L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market position</th>
<th>Define competitive bandwidth</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C1</strong></td>
<td>Especially for customers with a high propensity to lapse, it is required to come up with an offer in line with market competition:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Attractive for high-valued customers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Unattractive for low-valued customers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business rules</th>
<th>Calculate premium adjustment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- ( \text{CLV}_{\text{new}} &gt; 0 )</td>
<td>( P_{\text{new}} = \max(\text{P}<em>{\text{ref}}, \text{P}</em>{\text{cur}}) )</td>
<td>800</td>
</tr>
<tr>
<td>- ( P_{\text{new}} &gt; 0.95 \times P_{\text{top}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- If ( \text{P2L} &lt; 10% )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- ( P_{\text{new}} = \max(\text{P}<em>{\text{ref}}, \text{P}</em>{\text{cur}}) )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Premium adjustments:
Define adjustments and conditions to be applied on different groups of customers, to come up with the price that maximizes the long term value for both customer and P&V.
Example 2: Dynamic Pricing

3 Customer value

Propensity to lapse > 20%

Retention focus

Av %

Value focus

Value at Risk (€) (Revenue – Cost)

Example options for retention:
- Premium discount
- Cashback
- Specific retention treatments aligned with lapse driver

Example options for additional value:
- Premium mark-up
- Limitation coverage
- Deductible increase

Simplified example for discounts/markups*

<table>
<thead>
<tr>
<th>Propensity to lapse</th>
<th>0%-10%</th>
<th>10%-20%</th>
<th>&gt; 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 200</td>
<td>85%</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>0 to 200</td>
<td>95%</td>
<td>90%</td>
<td>85%</td>
</tr>
<tr>
<td>-200 to 0</td>
<td>105%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>&lt; -200</td>
<td>120%</td>
<td>110%</td>
<td>110%</td>
</tr>
</tbody>
</table>

* Premium adjustment rules are determined during implementation:
  - Differentiation can also be based on different other input factors like broker retention rate, current market position, etc.
  - Target is to maximize value, so keep premium as high as possible to keep desired customers satisfied.
### Example 2: Dynamic Pricing

#### A. Input data is put in a comparison database to receive quotes

**Input data**

- Product: xxx
- Servicing: xxx
- Registration nr: xxx
- Date of birth: xxx
- Years no-claim: xxx
- Kilometers: xxx
- Zip code: xxx
- Address: xxx
- …: xxx

#### B. The reference premium is ranked amongst selected peer competitors

<table>
<thead>
<tr>
<th>Provider</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>€ 690,-</td>
</tr>
<tr>
<td>C2</td>
<td>€ 772,-</td>
</tr>
<tr>
<td>C3</td>
<td>€ 771,-</td>
</tr>
<tr>
<td>C4</td>
<td>€ 896,-</td>
</tr>
<tr>
<td>C5</td>
<td>€ 932,-</td>
</tr>
<tr>
<td>C6</td>
<td>€ 989,-</td>
</tr>
</tbody>
</table>

#### C. Business logic defines how P&V invite premium can be adjusted

**Business logic examples**

- Final premium is capped at 95% of top in market
- Discount of 14% would position top 3
- Markup of 10% would position out of top 10

**Example outcome**

Given a customer with:

- High CLV (> € 1000)
- High propensity to lapse (> 25%)
- And current market position (4th)

Discount for this customer would be minimum 14% to reach top 3

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De P&V Groep bestaat uit de merken P&V, VIVIUM, Actel, PNP, Euresa-Life en Arces

Le Groupe P&V est composé des marques P&V, VIVIUM, Actel, PNP, Euresa-Life et Arces
Conclusion: New techs and Big Data are an opportunity but also a real challenge...

• We must continue to ensure risk pooling and use Big Data in the respect of mutualist principles

• We must take care that our business will become not become more and more dependent of actors collecting data (GAFA,…)

• Data privacy and new risks linked to the new technologies are the next challenges for our business

But

• New techs and Big Data open a wide range of opportunities in Offering and Pricing

• Collaborative economics and social networks allow the achievement of the founding values of mutuality

• Mutuals who make judicious and necessary product innovation choices will be able to take advantage of new technologies to deepen the relationship with the client-member