Use of data, user knowledge and machine learning to drive engagement and create a sustainable subscription business
Largest local media company in Sweden.

19 news destinations covering a large portion of Sweden.

400,000 active digital customers.

A booming digital advertising business.

A digital ecosystem: Products, platforms and tech for data, content and ad business.

In-house development of products and tech.

A mission to uphold local democracy by staying relevant to readers and customers.

To do so, we must transform fast and agile.
To uphold mission, we must transform from legacy media company to local information partner.

Real challenge is NOT primarily about changes in media interfaces.
Challenge: Regain position in new contextual reality of customers

Strategy: Presence in customers routines by personalized products
First step: Understand their routines
Routine patterns: A needle in a haystack
<table>
<thead>
<tr>
<th>Persona  #</th>
<th>Morning</th>
<th>Lunch</th>
<th>Afternoon</th>
<th>Evening</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persona 1</td>
<td>25%</td>
<td>15%</td>
<td>30%</td>
<td>25%</td>
<td>5%</td>
</tr>
<tr>
<td>Persona 2</td>
<td>5%</td>
<td>10%</td>
<td>50%</td>
<td>30%</td>
<td>5%</td>
</tr>
<tr>
<td>Persona 3</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Persona 4</td>
<td>70%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Persona 5</td>
<td>25%</td>
<td>15%</td>
<td>30%</td>
<td>25%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Quantifying routines
Example: comparing two clusters

Cluster 9
- Morning: 74%
- Lunch: 10%
- Afternoon: 7%
- Evening: 9%

Cluster 13
- Morning: 8%
- Lunch: 7%
- Afternoon: 11%
- Evening: 74%
Visualization of cluster specific routines
Routines stay the same over time
Day for day comparisons
<table>
<thead>
<tr>
<th>Persona #1</th>
<th>Morning</th>
<th>Lunch</th>
<th>Afternoon</th>
<th>Evening</th>
<th>Night</th>
<th>Age</th>
<th>Churn prob.</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25%</td>
<td>15%</td>
<td>30%</td>
<td>25%</td>
<td>5%</td>
<td>46</td>
<td>11%</td>
<td>Sport</td>
</tr>
<tr>
<td>Persona #2</td>
<td>5%</td>
<td>10%</td>
<td>50%</td>
<td>30%</td>
<td>5%</td>
<td>57</td>
<td>23%</td>
<td>Crime</td>
</tr>
<tr>
<td>Persona #3</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
<td>40%</td>
<td>20%</td>
<td>68</td>
<td>7%</td>
<td>Traffic</td>
</tr>
<tr>
<td>Persona #4</td>
<td>70%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
<td>73</td>
<td>14%</td>
<td>Opinion</td>
</tr>
<tr>
<td>Persona #5</td>
<td>25%</td>
<td>15%</td>
<td>30%</td>
<td>25%</td>
<td>5%</td>
<td>44</td>
<td>30%</td>
<td>Business</td>
</tr>
</tbody>
</table>

The full image of our customers daily consumption routines
Why do we need a personalized experience to monetize and drive reader revenue?

It’s a simple matter of supply and demand.
The churn process from a supply-demand perspective in a average based/non-personalized information product
Relative consumption in an average product
Relative consumption in a personalized product
Stable training data
New data
Adapted user experience

Optimizing content distribution
Launch of live test articles per user/hour

Day -15

Day +15
Launch of live test

Content consumption during live test
Proven effect in Mittmedias machine driven personalization
Mittmedia
Questions?