



Using Clintview results in a decisioning engine for customer offer management

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swisscom

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Together we make data work

Vision: Data, Analytics & AI, Swisscom (Schweiz) AG



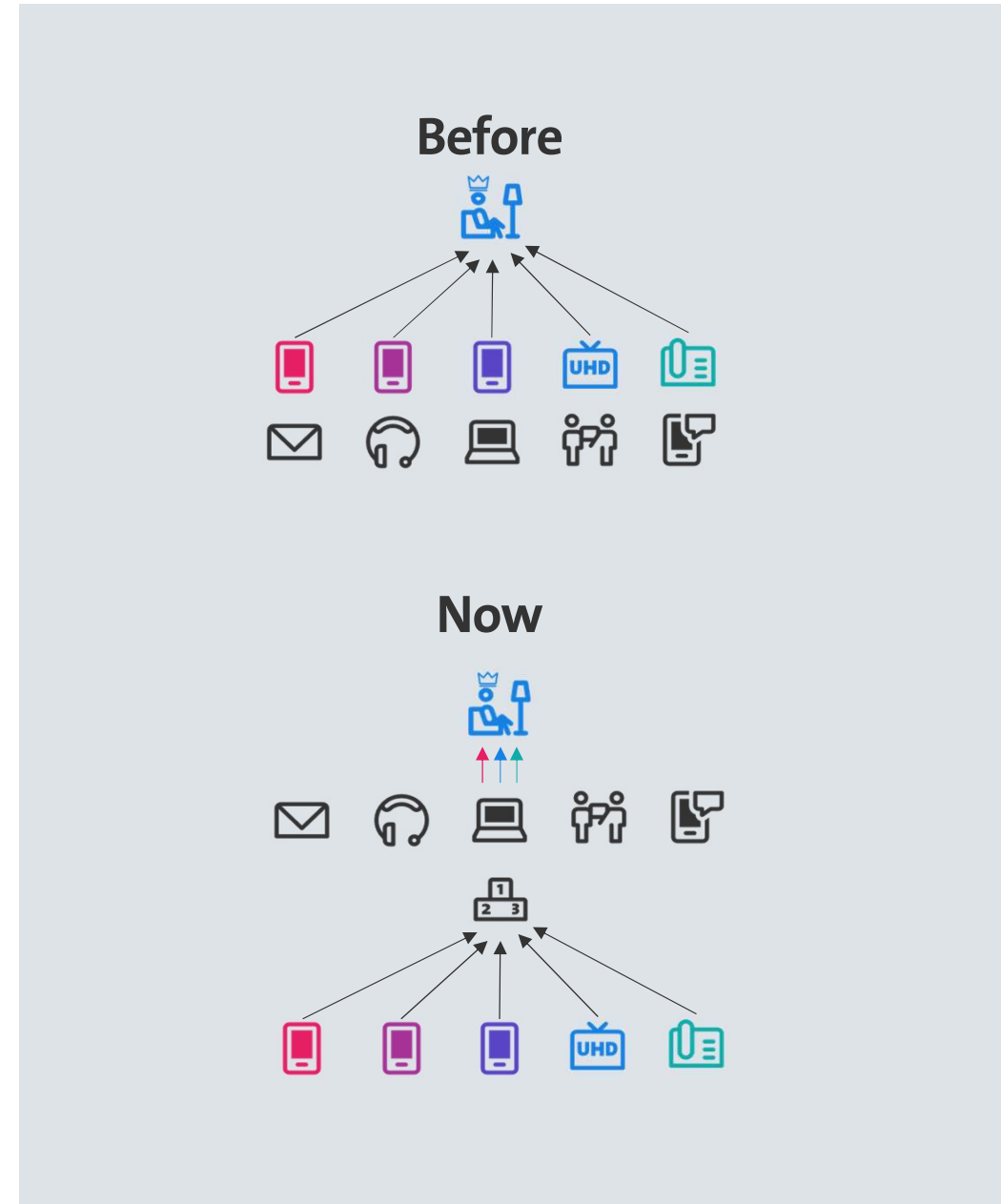
We centralized recommendation and offer calculation

Team mission

We are the team to calculate the recommendations for strategic offerings for all channels and all customer segments.

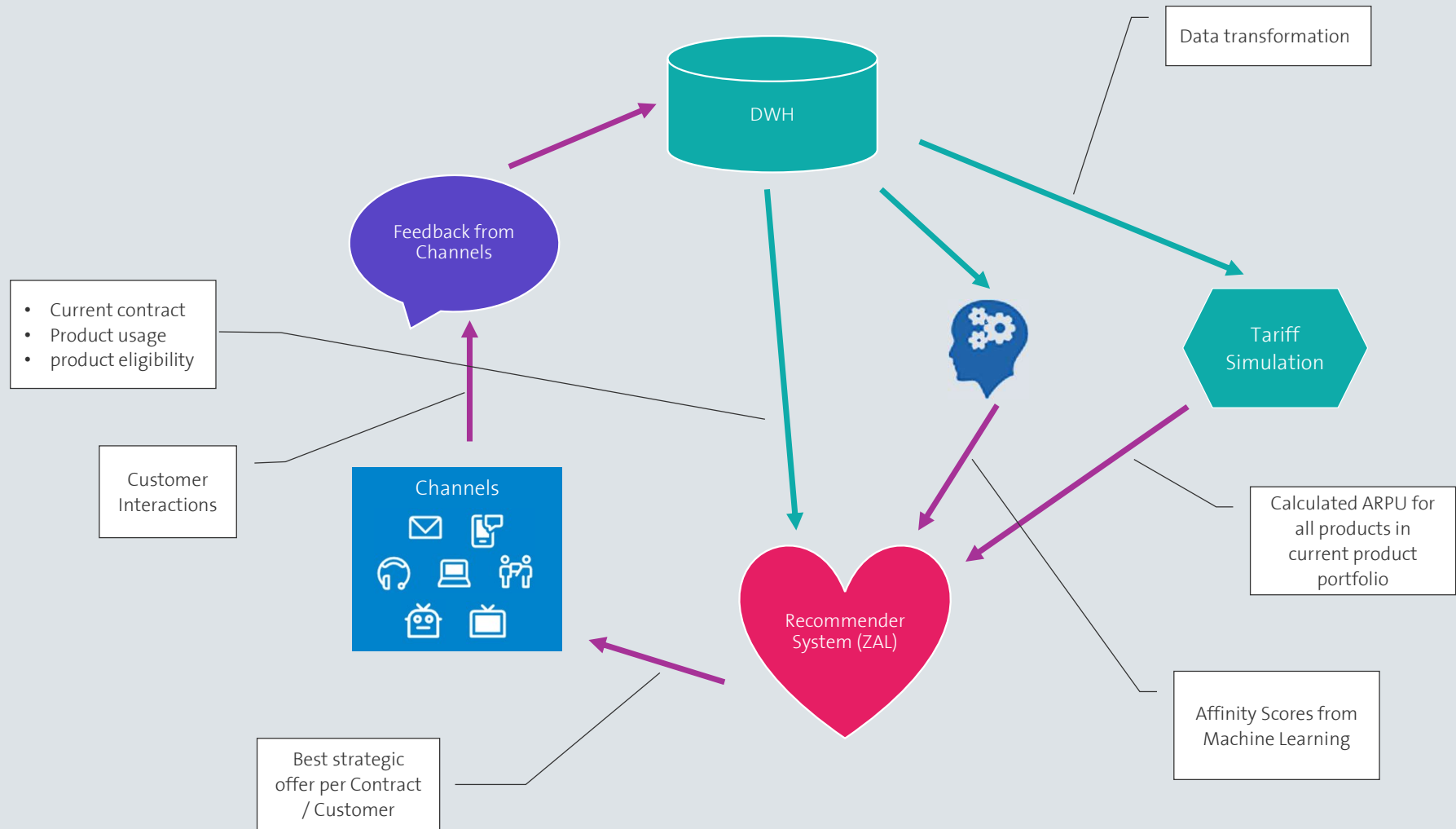
Team Vision

- Deliver the best recommendations to all channels
- The recommendations optimize the benefit for Swisscom as well as the customers
- Support our channels with upselling and downgrading prevention recommendations
- Automatization of offer creation





ZAL closed loop ecosystem





From tariff simulation to the recommendations



Tariff Simulation

Calculate ARPU over the last 3 months for all target priceplans Wireless and Wireline

- WLS
 - 2.5m contracts
 - 22 target priceplans
- WLN
 - 1.3m contracts
 - 3 target priceplans
- Affinity rules instead of B&B



Generate recommendations

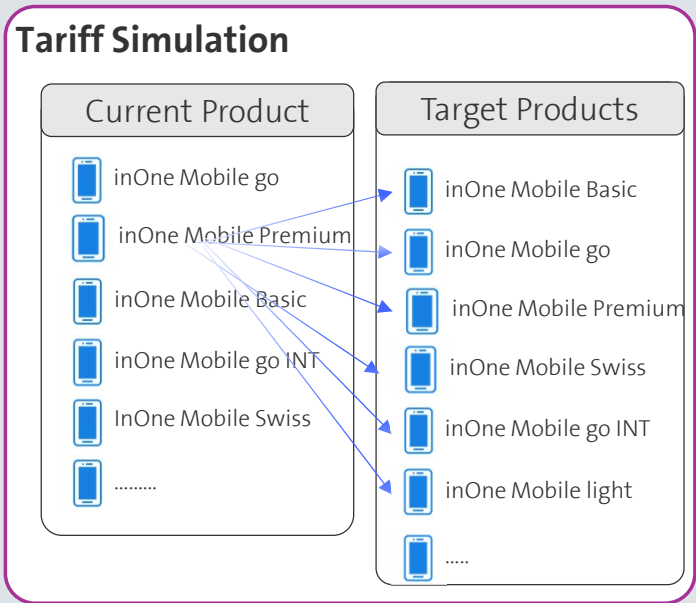
Identify the most suitable product of the available ones for our customers

- AI (multi objective)
 - Accuracy
 - Revenue
- Rules
 - Technical Rules
 - Marketing Rules
 - Blocker Rules



Combined AI and rule-based approach to generate recommendations

How do we select the most suitable recommendation?



- x
- x
- ✓
- ✓
- ✓
- x

ZAL Eligibilities

Technical Eligibility
Available BB Speed, TV Eligible, Access Point Fiber / Copper...

Marketing Eligibility
At least same BB Abo Speed, TV and Voice Features, no Downselling, no ARPU loss...

Blocker Rules
ARPU loss, Promotion...

MORS

Choose best abo of the eligible ones

- **Multi Objective Recommender System**
 - > Machine Learning algorithm that optimizes on multiple objectives : accuracy and revenue
 - > we choose the one with the highest rank
 - > MORS was developed by EPFL students
- No more Business Rules

Recommendation

- inOne Mobile go + international flat
- Happy Customer
- Happy Swisscom



Rules and AI is important for us



Boost recommendations – AI in ZAL



MORS

Multi Objective Recommender System¹



Affinity models

Classic binomial and multinomial affinity scores

E.g. logistic regression

¹See <https://arxiv.org/pdf/2001.00846.pdf>



Very close to the customer, learning dynamically
Interesting for promotions



GMM collaborative filtering

Gaussian Mixture Model based collaborative filtering

Analyzing behavior of similar customers



Segment based collaborative filtering with strategic booster

Analyzing behavior of similar customers

Strategic post processing



50 k rows code and
still...
a huge backlog



25 Target products



441 Different basic products



544 Conditions



46'173 Rows code



1'300'000 WLN contracts



2'500'000 WLS contracts



13'730'369 Rows updated per day (avg)



16'558'825'805 Recommendations



Where are the recommendations used?



1to1 Campaigns

Customer selection for 1to1 campaigns in specific channels based on ZAL recommendation



Web banner

Individual recommendation for identified customers



B2B offer tool

B2B wireless offer tool for SME



Bundle flavour selector

Recommendet bundle configuration in web tool for aquisition on swisscom.ch



Abo change tool

Recommendations in self service application



TV screen

TV contract related recommendations on tv main page



ZAL supports strategic wireless offering for SME customers



ZAL provides recommendations and simulated expected spending to the offering tool MBS light



MBS light is used by approx. 120 SME back end sales and 20 DMC employees



Total 140 simulations and 250 strategic offerings per month are calculated in SME offering tool.



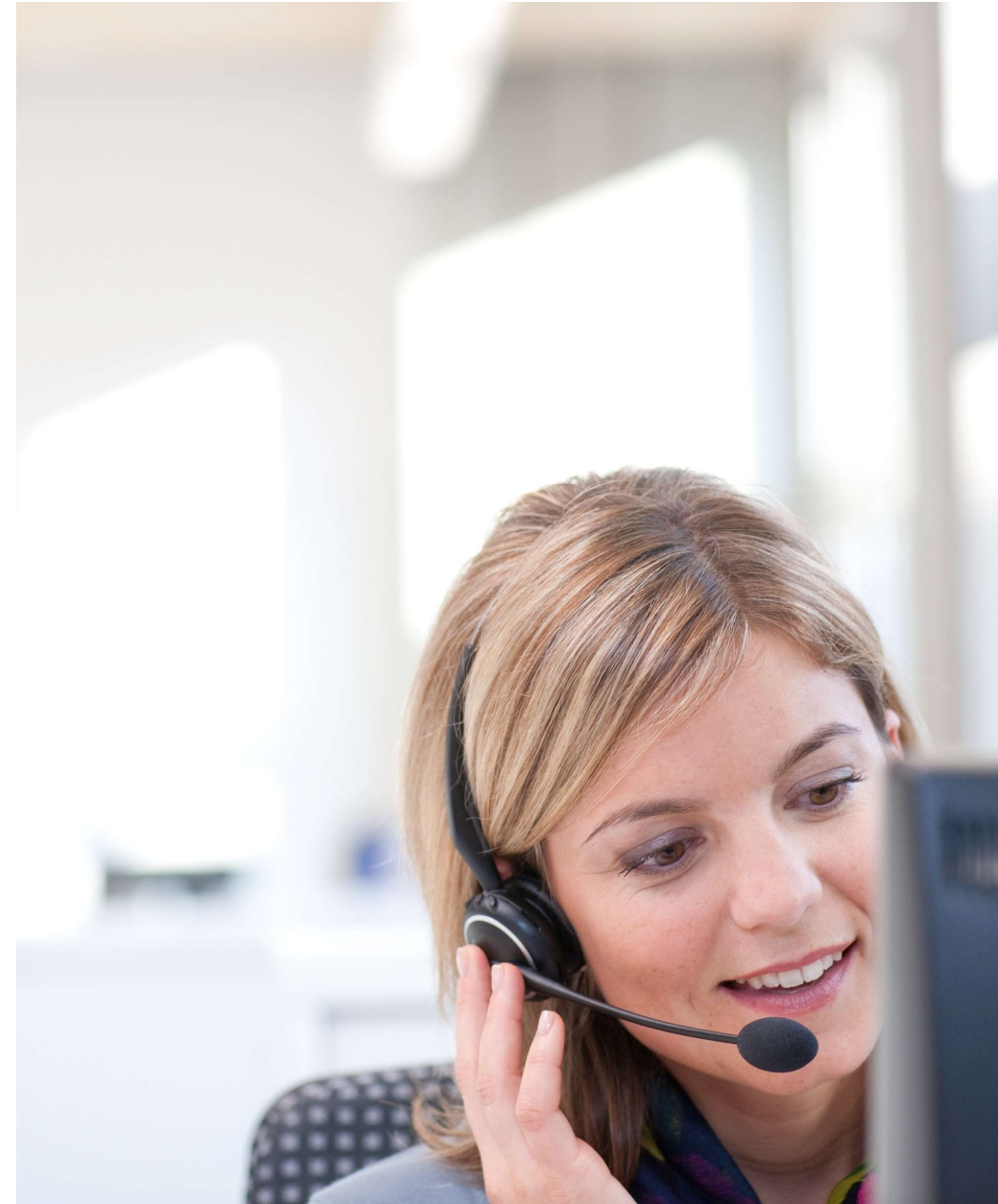
ZAL provides recommendations for 4 different scenarios:

- Wireless upselling mobile only customers
- Wireless upselling convergent customers
- Wireless churn prevention mobile only customers
- Wireless churn prevention convergent customers



Strategic aim of these scenarios:

- Upselling
- Churn prevention



Simple Simulation MVP

Current Customer: XXXXXXXXXX 🔍 📄 🗑️

📄 Customer Info [📄 Offer](#) [📄 Export](#)

Select Scenario

Please select a scenario first and customize the offer under the details tab. When changing the scenario, customizations will not be transferred but kept in the previous scenario.

	Name	Revenue	Revenue Ø per SIM	Base Fee	Change
▶	Wireless Business Prevention	1'912.45 CHF	49.04 CHF	1'739.55 CHF	263.95 CHF (+16%)
▶	Wireless Business Base	2'014.75 CHF	51.66 CHF	1'891.90 CHF	366.25 CHF (+22%)
▶	Wireless Business KMU-Vorteil	1'822.95 CHF	46.74 CHF	1'691.70 CHF	174.45 CHF (+11%)
▶	Wireless Business Prevention Vorteil	1'790.45 CHF	45.91 CHF	1'642.55 CHF	141.95 CHF (+9%)

Include Below The Line Abos

Overview [MSISDN \(39\)](#) [Removed MSISDN \(0\)](#)

New Offer - Wireless Business Prevention

Change the offer for every card by clicking on the new abo name. Additional options can be added by clicking the corresponding link in the new options column. Filter cards by clicking on the filter item in the top right or edit multiple cards at once by using the checkboxes on the far right in combination with the buttons below.

MSISDN	Current				New				Change	Rating	
	Abo	Options	Revenue	Base Fee	Abo	Options	Revenue	Base Fee			
	Swiss KMU mobile light	—	CHF	CHF	Swiss KMU mobile light (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	Swiss KMU mobile flat	—	CHF	CHF	Swiss KMU mobile flat (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	inOne KMU mobile XS	—	CHF	CHF	inOne KMU mobile go	Add Options...	CHF	CHF	23.20 CHF (+48%)	🟡	<input type="checkbox"/>
	inOne KMU mobile basic	—	CHF	CHF	Swiss KMU mobile light plus	Add Options...	CHF	CHF	-7.25 CHF (-22%)	🔴	<input type="checkbox"/>
	NATEL® business light XS	—	CHF	CHF	NATEL® business light XS (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	inOne KMU mobile go	—	CHF	CHF	inOne KMU mobile go (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	inOne KMU mobile go	—	CHF	CHF	inOne KMU mobile go (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	Swiss KMU mobile light plus	—	CHF	CHF	Swiss KMU mobile light plus (STAY)	Add Options...	CHF	CHF	0.00 CHF (NaN)	🟡	<input type="checkbox"/>
	Swiss KMU mobile light	—	CHF	CHF	Swiss KMU mobile light (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
	Swiss KMU mobile flat	—	CHF	CHF	Swiss KMU mobile flat (STAY)	Add Options...	CHF	CHF	0.00 CHF (0%)	🟢	<input type="checkbox"/>
			CHF	CHF			CHF	CHF	263.95 CHF (+16%)		0 / 39

1-10 of 39 records: « < 1 2 3 4 > » 10

[✖ Reset](#) [🗑 Remove](#) [⚙ Change Abos](#) [+ Add Option\(s\)](#)



Questions

With tariff simulation and our recommender system we can recommend optimal priceplans for customers and Swisscom

swisscom

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