Predicting and Preventing Churn with Customer Health Scoring

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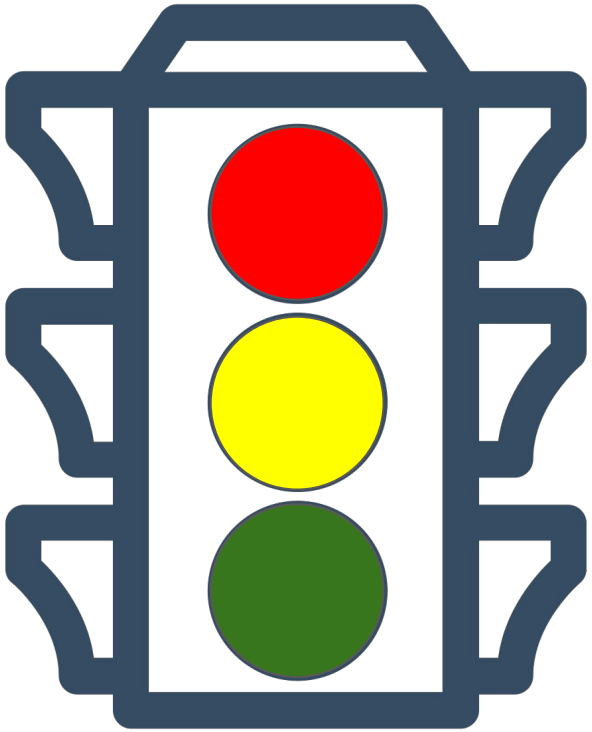
My experience in Customer Health Scoring

InteliSecure

simPRO

What is a customer health score?



A “red-yellow-green” assessment of the level of risk with the account

What is it used for?

Focus	Helps your Customer Success Managers be more proactive about where they spend their time
Automation	In tech-touch, product-led, fully automated environments, health scores can trigger actions to support, retain, and upsell customers
Forecasting	CFOs at many companies associate probabilities to health score color codes and use weighted sums to estimate future revenue
Improvement	health dashboards communicate account status, and when supported, they can show how improvements helps customer health and installed base revenue

Where do teams typically start?

"What's your gut say about this account?"

"I don't know. I think I'd call them Yellow."

CustomerID	Risk	ACV
1		$65,000
2		$80,000
3		$72,000
4		$140,000

Why is predictive accuracy important?

Bad accuracy = bad decisions

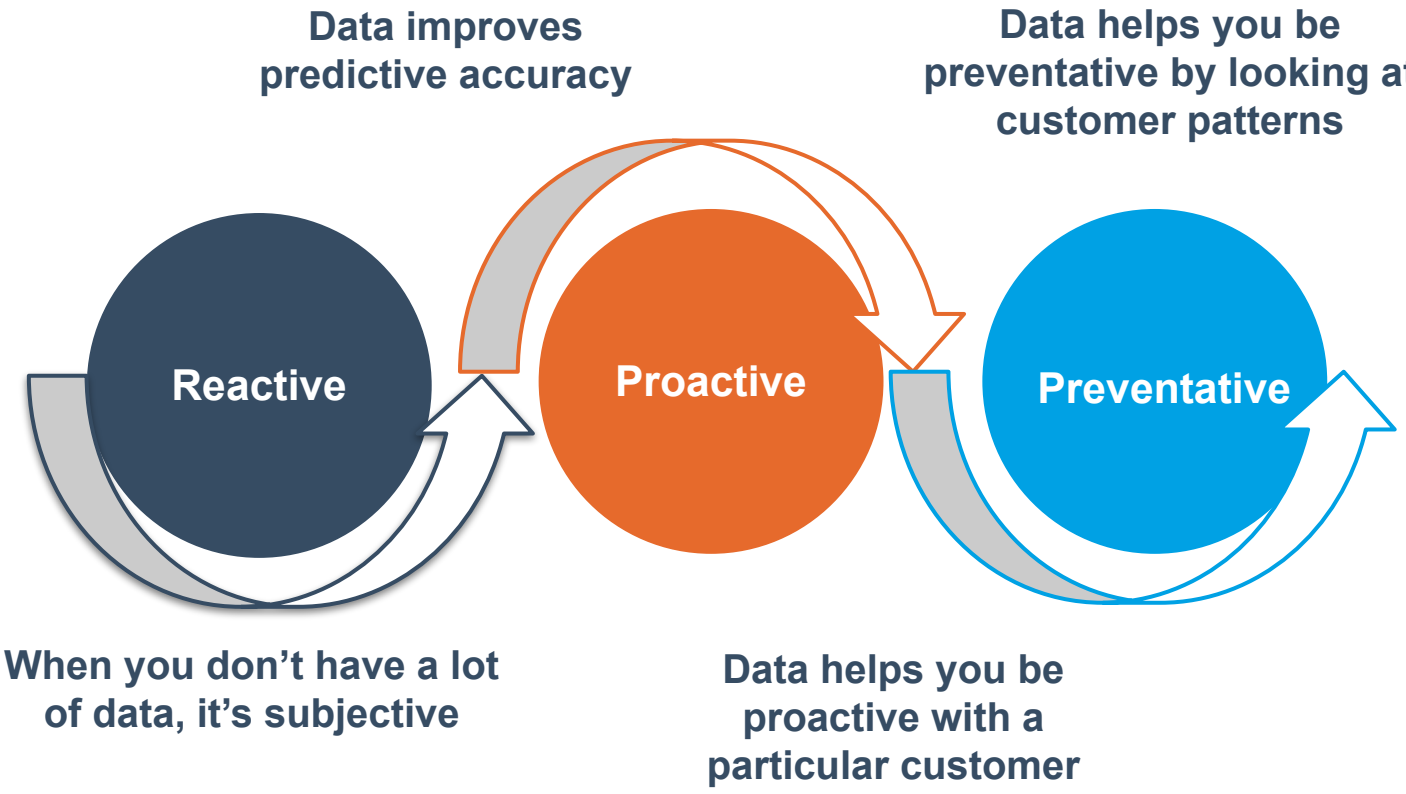
The watermelon problem

When do you need to get more sophisticated in your approach?

In sales-led companies, you get more sophisticated as you add more accounts

In product-led (PLG) companies, you build models very early

How does adopting a more analytical approach help you move from reactive to proactive to preventative when it comes to churn?



FOR DISCUSSION

Which variables are you using in your health score?

- Usage data (what kind?)
- Adoption data (what kind?)
- Sentiment data (what kind?)
- Customer goals or fit attributes
- Support tickets (what kind?)
- Payment history
- Something else?

COME OFF MUTE OR COMMENT IN THE CHAT

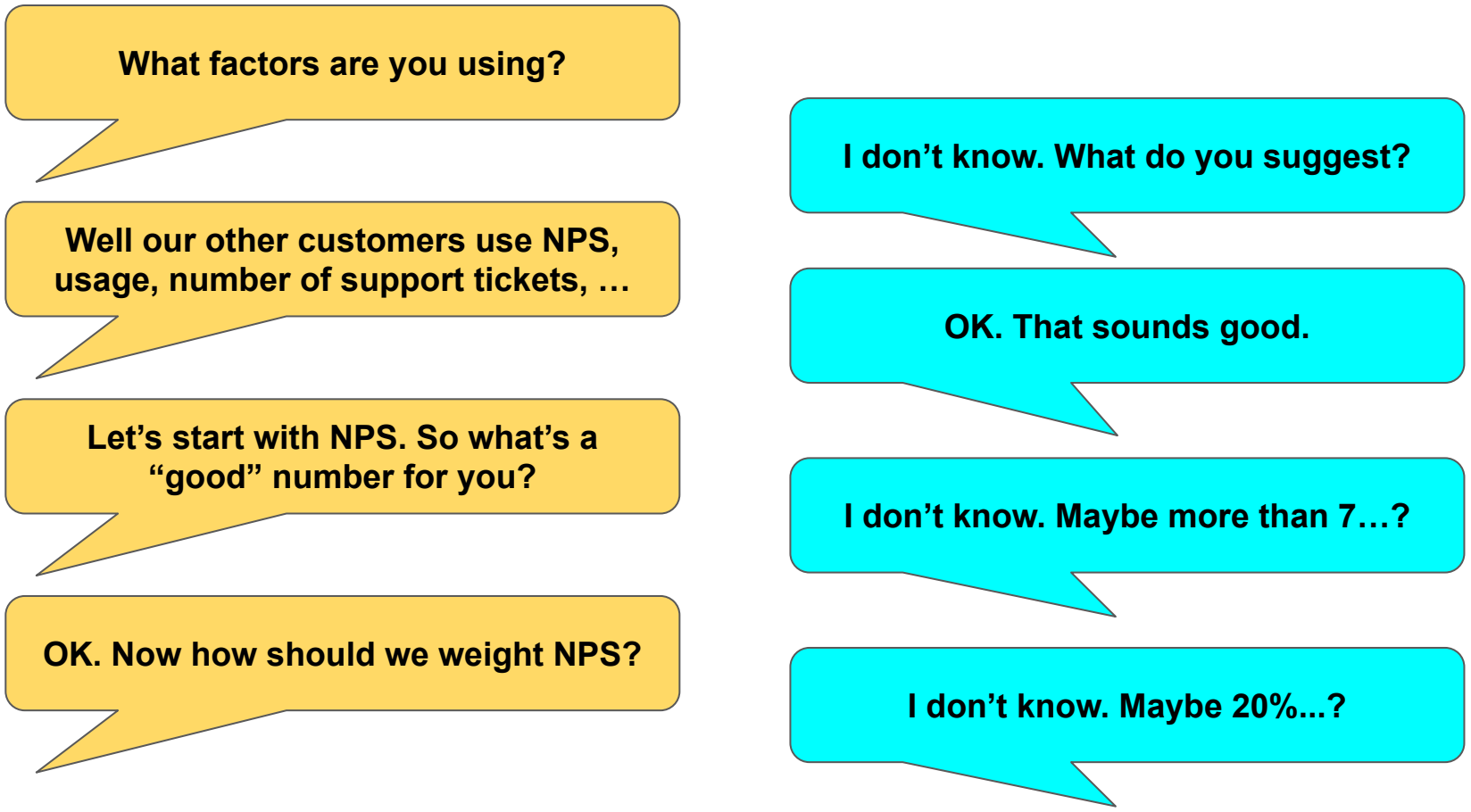
What types of data can go into health scores?

- Usage data
- Onboarding and adoption
- Sentiment and satisfaction
- Customer goals and TTV
- Support tickets (volume, criticality, TTR)
- Payment history
- Fit

How many variables should you include?

5-7

How do typical CS platform vendors compute customer health scores?



Customer Health Score = subjective factor * subjective weighting + subjective factor * subjective weighting + …

What would the steps be to build a more sophisticated, regression-based model?

1. Learn why customers leave and why others stay & buy more
2. Form hypotheses
3. Collect and clean the right data (this part is hard)
4. Analyze factors
5. Develop and test the model
6. Deploy the model

What's an example?

Y: Cancel/Renew

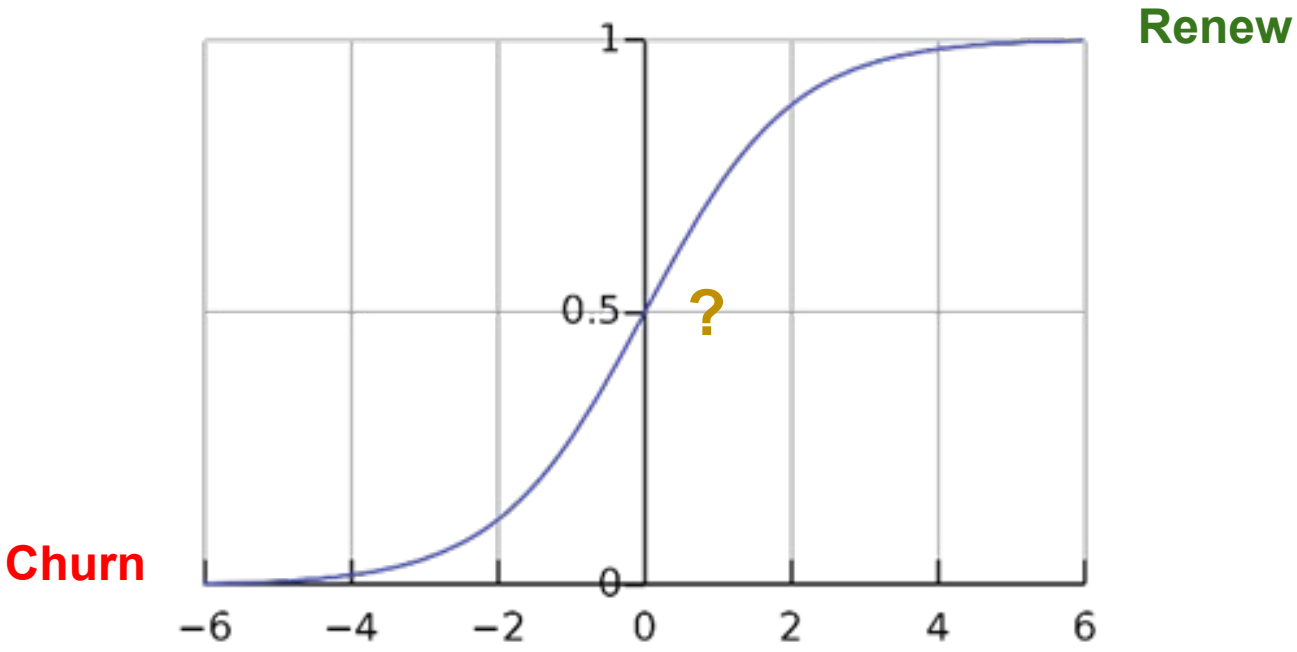
X_1: Lifetime Bookings

X_2: Weeks On

X_3: No Shows

X_4: Q Ratings

Model



$$\hat{y}(\theta) = \frac{1}{1 + e^{-\theta}}$$

$$\theta = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots \beta_n x_n + \varepsilon$$

Logistic Regression

β

		coeff b	s.e.	Wald	p-value	exp(b)	lower	upper
	Intercept	-1.53395	0.22	50.3	1.3E-12	0.22		
X_1	Lifetime Bookings	0.10789	0.01	173	2E-39	1.11	1.1	1.13
X_2	Weeks On	-0.00029	0	0.01	0.94291	1	0.99	1.01
X_3	No Shows | All Time	-0.09058	0.02	33.8	6.2E-09	0.91	0.89	0.94
X_4	Q Ratings | All Time	-0.004	0.04	0.01	0.92772	1	0.91	1.09

$$\theta = -1.53 + 0.11 * Lifetime\ Bookings - 0.09 * No\ Shows + \varepsilon$$

$$\hat{y}(\theta) = \frac{1}{1 + e^{-\theta}}$$

Classification Table

	Suc-Obs	Fail-Obs	
Suc-Pred	279	67	346
Fail-Pred	87	352	439
	366	419	785
Accuracy	0.762295	0.840095	**0.803822**

Deployment

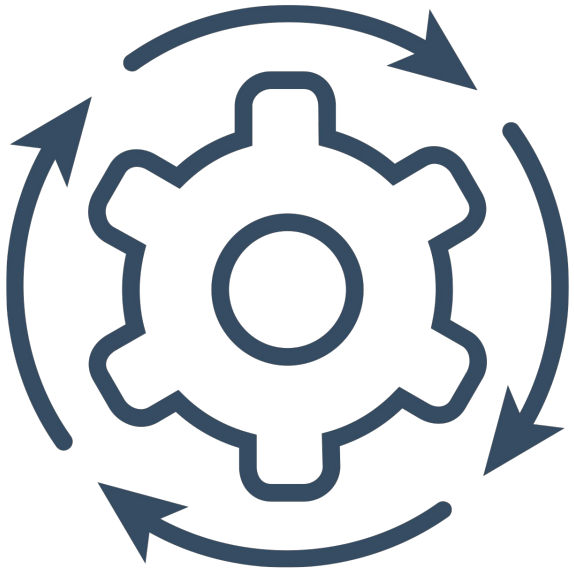
AccountID	Lifetime Bookings	No Shows	Retention
373	0	0	18%
432	0	1	19%
300	7	2	36%
184	11	0	42%
393	9	4	46%
247	12	11	69%
160	22	4	78%
145	23	3	78%
173	15	13	78%
371	26	0	79%
386	26	2	82%
145	26	2	82%
324	35	7	95%
146	63	0	99%

What tech tools do you need to run the analysis and operationalize the score?

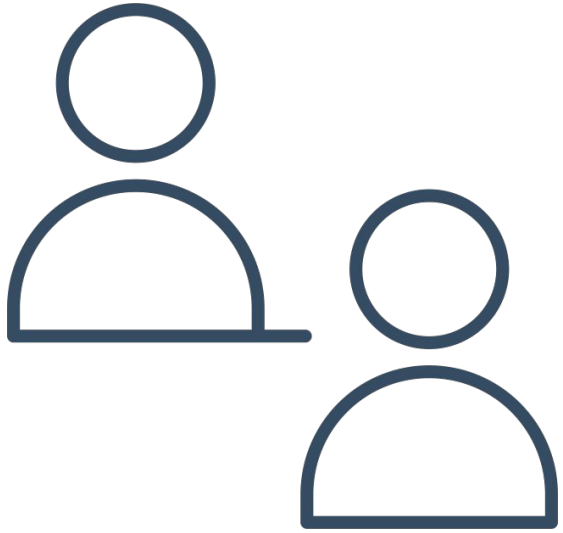
Excel (and a plug-in)	Statistical Software Packages	Customer Success Platforms
	IBM SPSS TIBCO™ alteryx Minitab®	Gainsight CHURNZERO STURDYAI UpdateAI ZAPSCALE

Who's responsible for developing and updating the customer health score?

CS Operations



A consultant
(if you don't have CS Ops)



How often should you revisit or adjust your model?

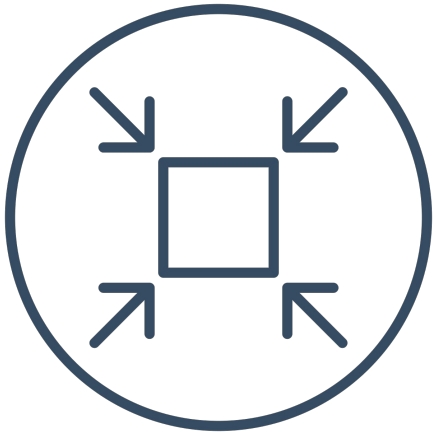
Check after a big external change (e.g. COVID)

The majority of models are based on historical evidence, so when a dramatic change happens that affects a sector, you can expect the models to become less and less predictive.

Test to see if the model is still performing well (and adjust when not)

You want to measure predictive accuracy at periodic intervals and understand if it's still performing within a margin of error that you want. If it degrades, then it's time to update it.

What are the most important pieces to get right?



Start outside in (with the customer)

Connect it to money

Apply the scientific method

Questions