

Maryland Product Symposium

Creating Customer Magic: How a VOC Mindset Fuels Insights for Innovation

Kristyn Corrigan

Principal and Practice Lead, Applied Marketing Science



A. JAMES CLARK
SCHOOL OF ENGINEERING

PRODUCT MANAGEMENT



A decorative graphic consisting of three overlapping, stylized arrow shapes pointing to the right. The top arrow is yellow, the middle is red, and the bottom is black.

Today's Agenda

1

How a needs-based approach can lead to better product development and experience design

2

The Advantages of an “always on” and “systematic” VOC Mindsets

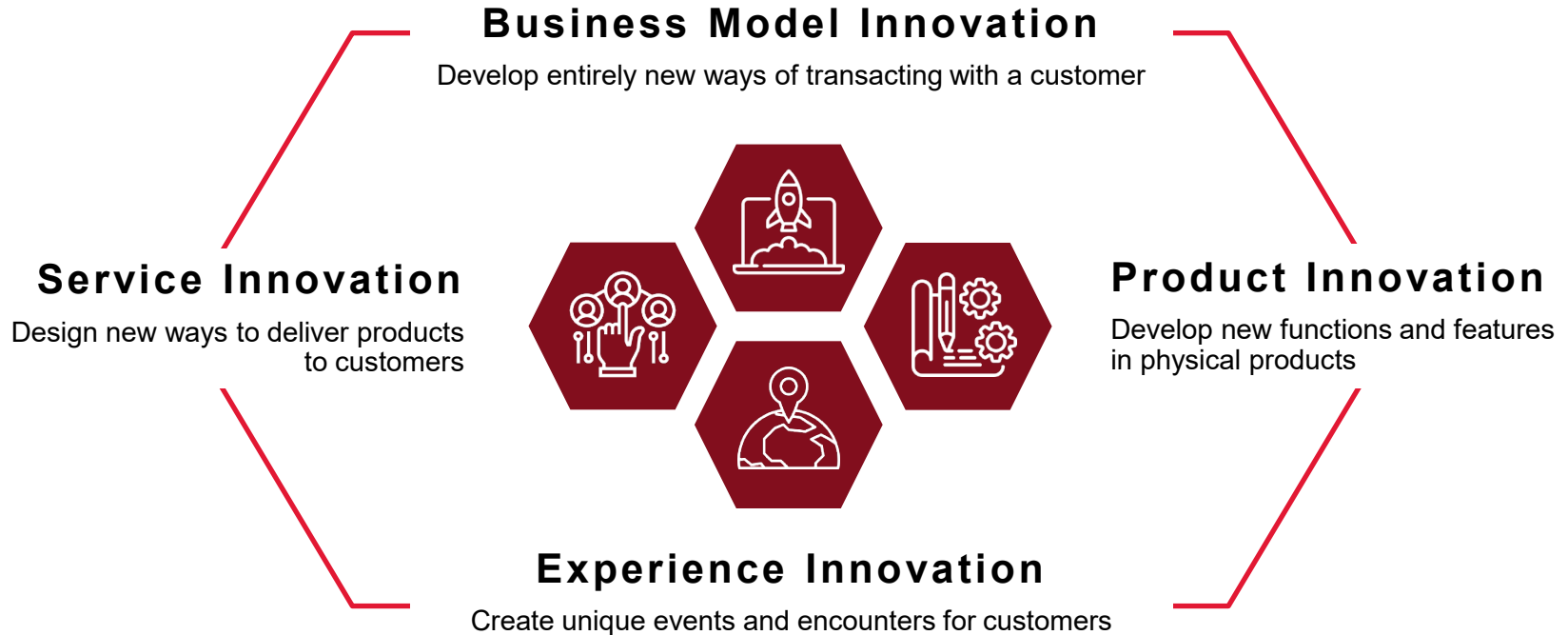
3

Evolutions in Customer Need Analysis



Needs Based Innovation

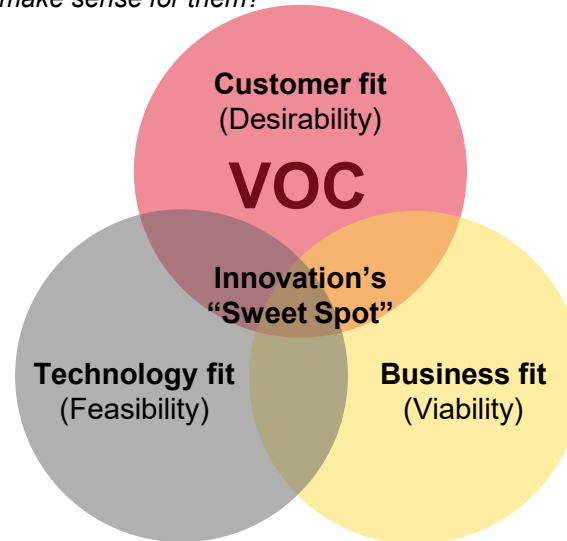
There are many forms of innovation





Attractive innovations must be desirable, feasible, and viable

What's the unique value proposition? Do people want this product or service? Does it make sense for them?



*Does this work?
Is it functionally possible in the foreseeable future?*

The “IDEO Circles”

Can we build a sustainable business? What must be true for this business to work? What are the costs? How will you pay for it?





Assuming you know what the customer wants is dangerous

Blockbuster

“People don't want to watch content over the internet.”

Lotus

“Our spreadsheet is far superior to Microsoft, even if it is complicated.”

Tower Records

“People want to own their own music, not rent it online.”

Blackberry

“Our security is what companies want. They won't let Android or iPhones on their network, even if our stuff costs more.”

Kodak

“People will always prefer film cameras, even if we invented digital ones.”





Purely technology-led innovation can be risky





Needs and solutions are fundamentally different

A background image showing the steel framework of a building under construction, with a blue sky visible through the structure.

NEEDS \neq SOLUTIONS

The hard truth: most customers are not innovators, so don't ask them to solve the problem.





Needs are the levers of customer value

Definition of a Need:

“A description, in the customer’s own words, of the benefit to be fulfilled by the product or service”



Functional



Stated



Emotional



Unstated



A decorative graphic consisting of three overlapping, stylized arrow shapes pointing to the right. The top arrow is yellow, the middle one is red, and the bottom one is black.

The Voice of the Customer

Dr. Abbie Griffin and John R. Hauser
(Marketing Science: Winter 1993)

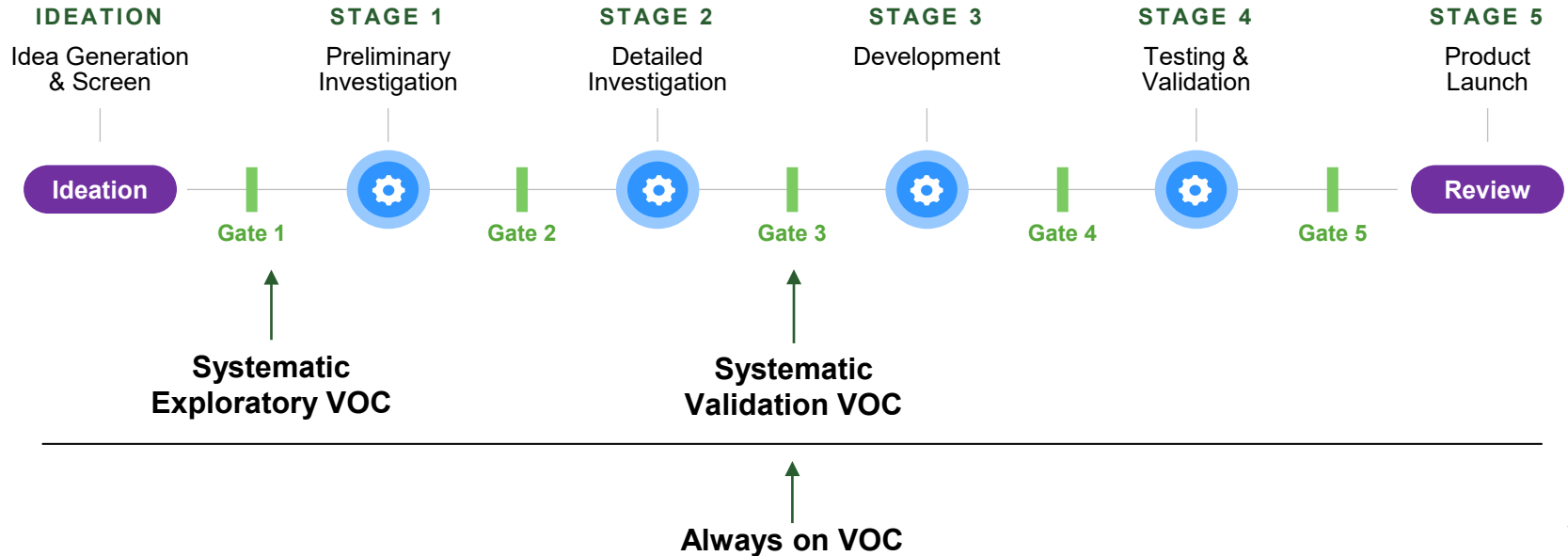




The Value of a VOC Mindset



VOC insights can be uncovered throughout the innovation process





Systematic, Exploratory VOC

When: Early Stage

Goal: Generate a complete set of customer needs, organized and prioritized by customers*

End: Prioritized set of needs to guide innovation



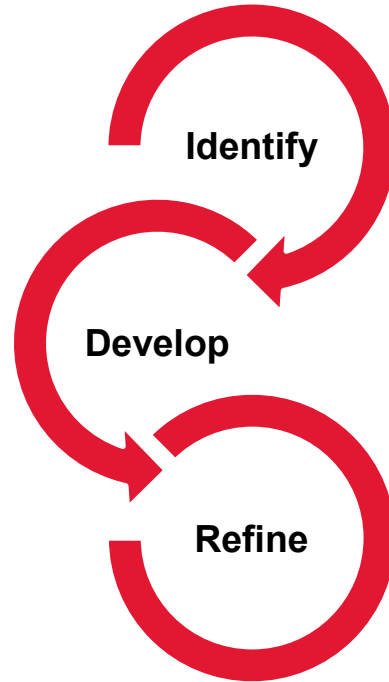


Validation Voice of the Customer

When: Mid Stage

Goal: Determine whether the product/concept addresses **needs that really matter**

End: Does the product satisfy customers **better** than existing alternatives?



Desirability and Key Needs

MVS: Minimal Viable Stimulus

Cycles of rework based on feedback



Having an always on VOC mindset means incorporating VOC listening techniques into day-to-day conversations and interactions



The respondent is the expert

Don't correct the customer.
Understand.



Do not go into sales mode

Turn the focus of the conversation to your customer. Avoid introducing bias.



Always probe to understand why

Probe when customers provide solutions, target values and generalities – their answers will often surprise you!



The power of storytelling

Stories are engaging and allow customers to share details and an unfiltered and candid way.



The value chain

It's essential to consider who your customer truly is. The answer is often not straightforward and not always your main point of contact





Observation can be a vital source of insight for product innovation



Wear patterns



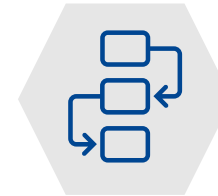
Notes and stickers



Workarounds and hacks



Repetitive tasks



System-switching



Disorganization





Advancements in VOC:

Evolutions in customer needs analysis



A new study of USA usage of AI for NPD reveals that only 18% of firms are using AI in their new product development processes, versus about 32% in Germany, and more in China and India

Cooper, Robert G. 2024. The Artificial Intelligence Revolution in new-product development." *IEEE Engineering Management Review* 52(1), Feb. 195-211. doi: 10.1109/EMR.2023.3336834. [The Artificial Intelligence Revolution in New-Product Development | IEEE Journals & Magazine | IEEE Xplor](#)



Many companies are sitting on a gold mine of user-generated content



3 BILLION+
ACTIVE SOCIAL
MEDIA USERS



100,000+
ONLINE FORUMS



265 BILLION
CUSTOMER SERVICE
CALLS EVERY YEAR



2+ HOURS
SPENT ON SOCIAL MEDIA
PER DAY (ON AVERAGE)



60 MILLION+
HAVE POSTED REVIEWS
ONLINE ABOUT PRODUCTS
& SERVICES

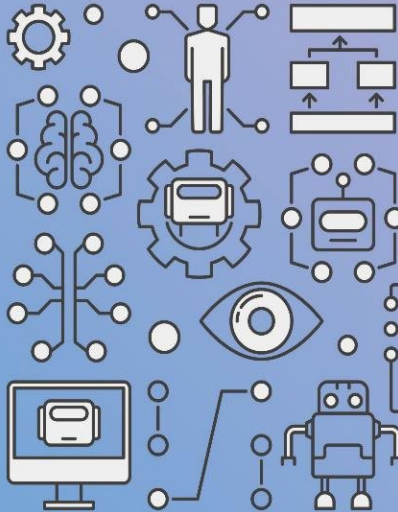


11
CUSTOMER SERVICE
INTERACTIONS PER YEAR





In 2017, AMS first partnered with researchers at MIT on machine learning for VOC




Sophisticated algorithm to reduce a massive database through the use of a convolutional neural network

1. Insights **comparable in number and quality** to traditional methods
2. Compared to analyzing a random sample of UGC, **machine learning yields better insights**
3. Can **identify important, infrequently mentioned** insights, less likely to surface with traditional methods





CHALLENGE



In 2023, we asked: “Can LLMs optimize the VOC process?”

*A research partnership with Dr. Artem Timoshenko,
Professor of Marketing, The Kellogg School of Management*



Needs come from a deep understanding of customer stories

“I replaced an old brush with a new one BUT the description doesn’t say that this model no longer has a 30 second timer. The brush shuts off after 2 minutes but the 30 second timer is missing. I would not have purchased this product if I had known.”

I know the right amount of time to spend on each step of my oral care routine

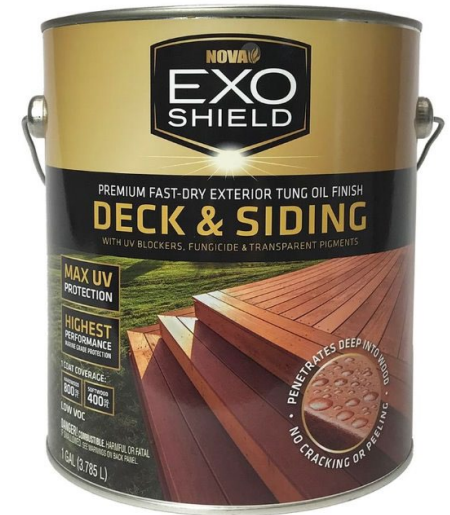




When we ask ChatGPT to simply extract customer needs from a review, it fails

“My favorite thing about this product is that it goes on pink. You can easily see that you have covered the area you need to cover. Then it turns to a wood color as it dries.”

Desire for a pink-colored wood stain treatment product.



The fine-tuned LLM can analyze text and come up with needs similarly to trained, human analysts

“My favorite thing about this product is that it goes on pink. You can easily see that you have covered the area you need to cover. Then it turns to a wood color as it dries.”

1. Allows me to easily see what surface areas I have already covered.

Professional Analyst

2. Able to see where I have applied the product (i.e., it is visible).

Fine-tuned LLM



The fine-tuned LLM can find different layers of needs, similar to when two humans read the same transcript

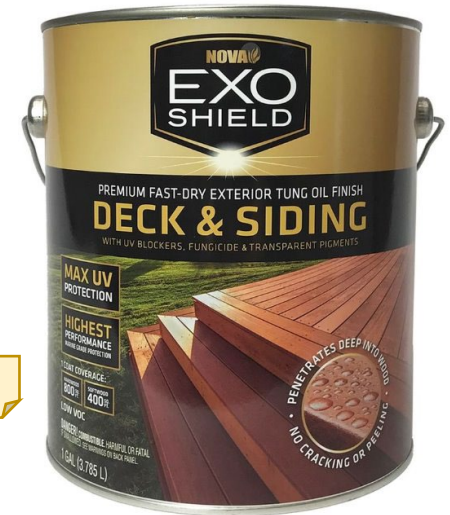
“Can I sand the finish after the 3rd coat? I don’t like brush strokes and I can’t seem to get rid of them unless I sand it, but I don’t know if I’m actually getting rid of the finish by sanding.”

1. No brush strokes are visible or left behind after application.

Professional Analyst

2. Able to sand the finish without removing the previous coats.

Fine-tuned LLM





Customer needs by the fine-tuned LLM are...

Typical

Similar to results to past, professional VOC studies

Actionable

Include sufficient details for product and CX development

Justified

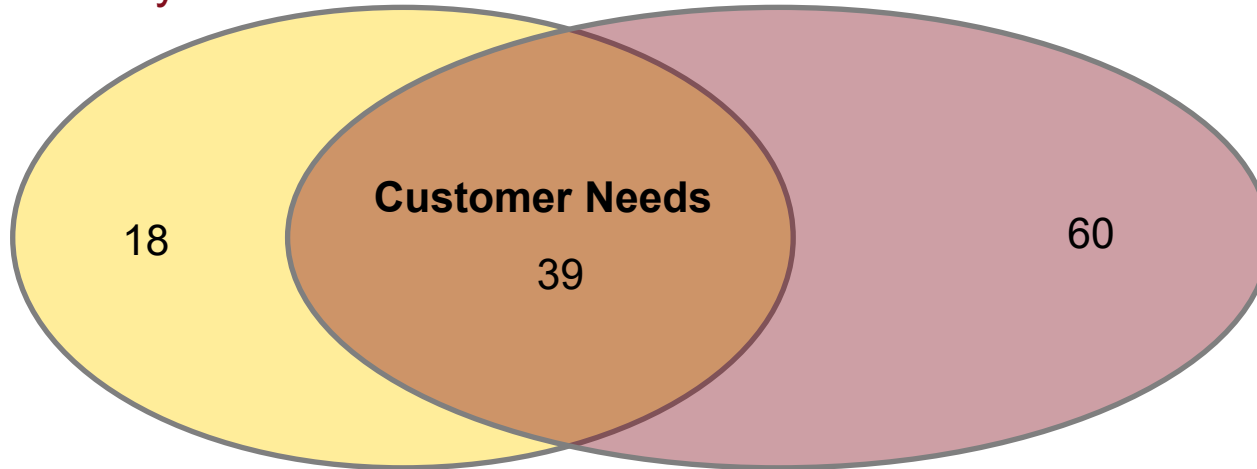
Accurately summarize information from text



LLMs identify new customer needs by efficiently analyzing lots of customer data

Professional Analysts

Fine-Tuned LLM



Questions?

Contact Kristyn Corrigan
*Principal and Practice Lead at
Applied Marketing Science (AMS)*
kcorrigan@ams-inc.com



**Access AI &
VOC resources
from AMS**



A decorative graphic consisting of three overlapping, stylized arrow shapes pointing to the right. The top shape is yellow, the middle is red, and the bottom is black.

Session Evaluation

Scan the QR Code

