



2018 Performance Plan for Yan Guo

Employee Information

FIRSTNAME	Yan	LOCATION	UPPER GWYNEDD PA USA-OFF
LASTNAME	Guo	COUNTRY	USA
TITLE	Assoc. Dir, Quant. Sciences-(56153131)	MANAGER	Senthil Murugan
DIVISION	GHH-Z005	JOB CODE	56153131

Year End Review

Overall Performance Category

Outperformed

Year-End Review Comments

Managers Comments

Summary

In 2018, Yan worked with multiple important brands with a total of about \$200MM+ consumer media investments. The brands include Keytruda, Nexplanon, Belsomra, Gardasil and Januvia. Yan developed and supported the development of Marketing Mix models and enhanced the team's capability by venturing into pathway analysis and thus enhancing the attribution capabilities. She has a great grasp of exposure to claim study by Crossix and is heavily involved in its appropriate applications to the brand strategies and channel impact analysis. Yan worked with Nexplanon brand team, COE and Crossix and developed an innovative solution to identify revenue maximizing optimal touchpoints for various media vendors. This analysis has a potential to choose appropriate vendors and target frequencies and save considerable amount of media investments. Both pathway analysis and optimal frequency studies are planned to be extended for multiple brands in 2019. Yan also helped in designing various ad-hoc HCC digital pilots (ex: Belsomra) and guided the development of reporting systems like CORI.

Yan performed well above expectations on the above mentioned projects. She has good sales skills, is proactive and is a highly regarded consultant by her clients. Her clients frequently include her in various relevant meetings, studies and decisions. This speaks well to the confidence her clients have on her. Yan proposes appropriate ideas with confidence. She is willing to learn a lot about various areas of business and grow her skillsets.

One area of opportunity for Yan is to more consistently keep her management informed of key insights and recommendations she is planning to share with clients. The purpose of this is for Yan to tap into any additional insights that management and/or other team members may be aware of that could improve the insights and recommendations Yan is offering to the client. I look forward to working with Yan in this regard in 2019.

Stakeholder Feedback

Yan's stakeholders expressed that Yan contributed significantly to get their arms around media planning. They feel much more confident in the investments they are making. She is a great collaborator and dedicates herself to help her stakeholders to increase overall effectiveness of the promotional activities. Yan also maintains deep level of engagement with other market research and marketing performance activities. Her key strength includes being very vocal and not shy about making recommendations. She makes consistent effort to be present and "plugged in" to all of other analytic work streams outside IADS. Yan has gone above and beyond reasonable activities to ensure deliverables are both accurate and timely. She is also seen as a great educator and solutions provider.

Performance Priorities

Complete

HCC Media Measurement/Optimization

Business

Enhance internal marketing mix modeling to measure incremental sales and isolate promotion impact from each HCC media channels. Partner with INI (a media agency) to perform scenario analysis based on promotion response curves from marketing mix analysis and recommend optimal investment strategy for HCC media mix.

Managers Comments

Yan worked effectively with consumer points of multiple important brand teams (Keytruda, Nexplanon, Belsomra, Gardasil and Januvia), ZS, media vendors and other internal teams. Yan helped to measure the ROIs through marketing mix models and other related statistical techniques for various media channels (TV, digital, search, print etc.) that have a very high investments in the tune of hundreds of millions of dollars.

In particular Yan has been a go-to consultant on media strategies for Merck's flagship brands like Keytruda. Yan helps the team by participating and providing valuable media related insights. She is considered as a great collaborative partner by brand teams such as Keytruda and Nexplanon where a large slice of consumer media spend is made.

Yan also helped to adapt new methodologies like pathway analysis that has a potential for better channel attributions. Pathway analysis has been expanding to multiple brands. Yan is tireless in running multiple what-if scenarios with brand leaders so as to identify most relevant and optimal (within given business constraints) HCC media channel investments.

Priority Details

Due Date 12/31/2018

Priority Updates 1. Yan Guo
12/31/2018

Led marketing mix analysis to evaluate promotion campaign performance, quantify business impact and deliver ROI for each consumer media channel for KEYTRUDA, NEXPLANON, GARDASIL 9, BELSOMRA and JANUVIA; Ran various what-if scenario analysis to support brand team's 2019 Investment Profit Plan

Provided promotional and cost effectiveness evaluation for \$117MM invested in KEYTRUDA TV, \$30MM invested in KEYTRUDA Paid Digital Media, \$14MM invested in KEYTRUDA paid search and \$7MM in Print.

Conducted pathway analysis to help brand team understand halo impact between consumer media channels and better specify multi-million investment mix plan

Completed what-if scenario analysis to determine the optimal resource allocation to support brand team's 2019 Investment Profit Plan.

Support team members to successfully complete 2019 IPF work and provide a portfolio view of investment across brands

Complete

Define the best practice and develop a method to quantify halo impact between HCC channels

Business

Develop pathway analysis module to understand relationships between HCC media channels and determine how credit for sales are allocated for cross-media promotions

Managers Comments

For Belsomra, Yan enhanced current Marketing Mix analysis by implementing a version of pathway analysis. This enhancement helps to attribute the impactables more thoroughly when there are heavy cross channel interactions. Pathway analysis was later applied to other brands such as Nexplanon, Januvia and Keytruda by ZS. Yan guided the development and implementation of these models very effectively and provided practical guard rails for such estimates.

Priority Details

Due Date	12/31/2018	Priority Updates	1. Yan Guo 12/31/2018 Conducted pathway analysis to help brand team understand halo impact between consumer media channels and better specify multi-million investment mix plan for BELSOMRA
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Complete

Led Exposure-to-Claim study in consumer marketing to support brand team's media planning decisions.

Business

Proactively provide insights and recommendations to optimize promotion investments to inform 2018 in-year optimization choices and 2019 Budget for HCC media by type

Managers Comments

Exposure to claims studies are some of the recent introductions to Merck. Yan worked with several stakeholders including Crossix and has a deep understanding of the offerings and insights provided by such analysis. Such expertise has made her a valuable consultative partner for the brand teams. Using data from exposure to claims studies (ex: net conversion rates) Yan computes ROI's of various HCC channels for many of other important brands (Nexplanon, Gardasil, Keytruda etc.) where \$100MM+ media investments are made. Yan's work has helped the brand teams to continuously review the performance of various vendors and choose investments wisely.

Priority Details

Due Date	12/31/2018	Priority Updates	1. Yan Guo 12/31/2018 Collaborated with market research team, COE, media agencies and Crossix to quantify net conversion lift driven by media campaigns, deliver data-driven insights, and recommend optimal media mix strategies for KEYTRUDA, GARDASIL 9, NEXPLANON, JANUVIA and BELSOMRA Provided Oncology executive management team ROI assessment for over \$100 MM investment on KEYTRUDA TV and ~\$50MM investment on KEYTRUDA Digital and
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Complete

Determine KPIs to improve ROI and optimize media strategy

Business

Partner with COE team and Crossix team to understand how reach frequency drives revenue and affects ROI for paid digital media channels, then determine the optimal minimum/maximum frequency, provide guardrails for different types of publishers and further improve campaign performance

Managers Comments

Yan closely worked with Nexplanon brand team, COE and Crossix and developed an innovative solution to identify optimal frequency of HCC touch points for various media channels and vendors. This solution has larger implications and savings potential for multiple brands and is being considered to be implemented for multiple brands in 2019.

Priority Details

Due Date 12/31/2018

Priority Updates

Complete

Media pilot program analysis

Business

Designed and developed a solid methodology for media pilot program analysis to evaluate promotion impact in testing markets.

Managers Comments

Given various data constraints, Yan devised an appropriate simple weighted relevant metrics based method to design a Belsomra heavy-up digital pilot. She identified relevant DMAs that would maximize impactable revenue for this pilot. The pilot was implemented by the Belsomra team.

Priority Details

Due Date 12/31/2018

Priority Updates

1. Yan Guo
12/31/2018
Successfully delivered pilot design for BELSOMRA Digital. Recommended the best-bet DMAs for additional investment in 2018 Q4 to accelerate revenue and promotion return

Complete

Consumer data management platform and reporting system development

Business

Worked with cross-functional team to design and build consumer data management platform (DMP) and consumer reporting and Insights tool (CORI) to support media targeting and media analytics across all franchises.

Priority Details

		1. Yan Guo 12/31/2018 1. Be partner with Salesforce Krux team to understand media data tagging and collection process. 2. Worked with third-party design vendor for dashboard design and KPI selection. 3. Planned to test CORI in production environment and provide feedback as a downstream user
Due Date	12/31/2018	Priority Updates

Complete

Expand knowledge and skills, and gain hands-on experience in different areas

Business

Completed required company training programs on time and attended a seminar of "Introduction to Structural Equation Modeling" offered Statistical Horizons

Priority Details

Due Date	12/31/2018	Priority Updates
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Signature

Manager: Senthil Murugan 03/08/2019

Employee: Yan Guo 03/15/2019