2022 Year End Promo Opt Performance Review – Manager Comments

General structure:

* General comments (3 bullets)
* Key 2021 projects (in several bullets)
* Stakeholder feedbacks
* Closing statement.

**Alex**

1. **General comments**

While writing the overall comments, I was reading comments I wrote last year. **I want to double down and reiterate them. These observations are repeated below (with minor modifications)**

*“Alex has impressed me in several different ways. He is hard-working, highly collaborative and has strong technical knowledge. His perseverance and focus on getting things done is admirable. Alex has a strong interest in knowing more about the data and business and is one of the quickest learners I have come across. These traits make him an invaluable contributor to the team. I am also impressed with how fast he jumped into client critical projects and provided immense values. Alex is a strong innovator and has great ideas and solutions for any project he gets into. Of particular mention is his creative thinking and solutions to get involved in innovative projects such as Synthetic Controls and R based tool developments. Alex is a great presenter – clear, concise and to the point. He is highly detail oriented. Sometimes I rely on him to educate me on some of the procedural nuances, technical methods, and business issues.”*

In 2022, Alex increased his functional and managerial responsibilities a lot by managing and executing all promotion optimization related activities for Vaccines Business Unit. In general, it takes multiple years for any new hires to take such responsibilities due to the complex and sensitive nature of the role in delivering value to business. Alex has done it in few months out of college and has executed them incredibly well. This is just testament to the skills he brings in. Alex has met and, in many instances, exceeded the expectations of Vaccines business stakeholders and HHIAD team members who worked with him. He is highly trusted by his stakeholders and often given audience with seior leaders (AVPs, VPs and SVPs). Alex made large contributions in terms of analysis that delivers potential additional revenues and savings in hundreds of millions of dollars to the marketing brand teams and Merck. He exemplified his leadership skills by coaching and managing many members of the team (including several consultants). I personally have learnt a lot from Alex – from statistical and machine learning methods to presentation and organizing skills. As will be seen in stakeholders’ comments below, Alex is highly collaborative – a key skill in the current complex cross-team environments setup within Merck. Alex is highly focused, organized and always willing to help others.

In recognition of his skills the promotion optimization team wanted to promote him and offer him a large increase in compensation. He wanted to always expand his knowledgebase and have decided to explore other areas within Merck. I fully support his decision, though it’s a loss for the commercial organization.

1. **Key 2021 projects and initiatives**

* Promotion Optimization Functional Area Leader for Vaccine BU – Mkt Mix models, Investment Optimization, Consumer and HCP Marketing promotion strategies
  + Managed, developed and informed about $108 MM marketing promotions investment in Gardasil Adults, Gardasil Adolescents and Pneumovax through Mkt Mix models and Investment Prioritization work streams.
  + Helped to optimize both Consumer (HCC) and HCP channels and vendors (35+ channels/ vendors) by suggesting reallocations with a potential impact of $20MM in additional revenue without any additional spends.
  + Quickly established himself as a trusted consulting partner and presented to brand leaders and senior leadership (AVPs and VPs of Vaccines BU)
  + Took several additional responsibilities during periods of resource crunch and managed analysis for additional vaccines such as Vaxneuance and PED vaccines.
  + Ran the whole process end to end, starting with collecting data from the media agency, processing it, running statistics models, and creating decks for presentation to the brand team.
  + Demonstrated critical business value to stakeholders (i.e., potential additional revenues in millions of dollars) by engaging in multiple adhoc initiatives. Some of these projects include a) identifying geographies for optimal pharmacy promotions and targeting (DMA ranking) for Gardasil Adult, b) Identifying differential promotion impacts to OB/GYNs vs PCPs for Gardasil Adults, c) Assessing the value of rural vaccines pilot, d) Working with Crossix to identify optimal frequencies and customer reach for various media publishers for vaccine brands.
* Key Innovative and Strategic Initiatives
  + Applied innovative and cutting-edge methods such as Synthetic Controls to a practical marketing business issue around the evaluation of promotions at CVS Pharmacies. This innovative analysis helped to establish a firm negotiation goal for marketing teams and market access teams during contracting discussions with CVS, thus saving several millions of dollars.
  + Processed complex promotional tactics and content classification data and applied innovative machine learning methods to understand the impact of several types of promotional contents on email clicks for Gardasil. Analysis established relevant expectations (5% to 20% improvement in click through rates) from such strategic content mapping initiatives and identified types of contents with maximum benefit on click rates.
  + Applied most relevant statistical and machine learning methods and metrics to properly evaluate content hyper personalization strategic initiative and guided ZS to set right expectations to Merck brand teams.
  + Took own initiative and developed an Investment Optimization tool using R-Shiny. These non-linear optimization methods are widely used for marketing investment optimizations by several brand teams and are currently in Excel. Alex’s initiative to streamline the process and make it as a R Shiny based tool will help the future projects in this area to be easily manageable, less training for new team members and more importantly organize all relevant data for both executing and referencing the information.
* Leadership and Personal / Team Development
  + Quickly learned about the data and business issues and has jumped into business critical analyses with a highly collaborative approach.
  + Coached, managed, and developed both team members and multiple offshore consultants on multiple ways to approach data, relevant statistical and machine learning methods.
  + Readily jumped in to guide and help team members and stakeholders to answer questions quickly and efficiently.
  + Within first year of his job, quickly established himself as a trusted consultant through his thorough research, story-telling, presentations and expertise on business issues, data and insights that matter to various stakeholders.

1. **Stakeholder feedbacks**

On Collaboration:

“*Alex is one of the most collaborative analysts I have ever worked with.”* – quote from one of the stakeholders. Alex is a great partner. He is incredibly knowledgeable and willing to go the extra mile to explain (and re-explain) his analysis to new members of the marketing team. His effective and strong collaboration skills are emphasized repeatedly by all stakeholders.

On Presentation, Consulting, and Subject Matter Expertise:

*“Alex doesn’t over complicate the results of things that are very analytical in nature. He tends to know how to adapt his presentation to the audience and his willingness to partner with the DETs to ensure effective presentations is very welcoming.”*  - quote from another stakeholder.

Alex has a great ability to ensure the slides he presents within ROI or Profit Planning aren’t just an onslaught of data but takes the time to trim them down to marketing speak so our leaders can effectively review them and make decisions. His ability to understand and present out the ROI data is very effective. He is aware of all modeling, methodologies, what data is being used, etc. so that he can field most questions at a moment’s notice.

Alex has strong media knowledge and great communication skills. He understands how to interpret data through a media lens, and he can effectively communicate with the agencies and internal stakeholders. He is very responsive and fast when it comes to deliverables. He also makes himself available to help answer questions or dive into data that falls outside of his normal responsibilities.

On Ways of Working:

Alex embodies Merck’s ways of work by the way he collaborates and “wins as one team,” “acts with urgency,” and “experiments, learns, and adapts.”

One of the stakeholders would like Alex to confidently think about and step into recommending strategies coming out of his analysis.

I am very lucky and happy to have had Alex as the promotion optimization team member. I am also happy that he chose to join the MRL team within Merck to expand and explore his areas of interest. I am very confident that his high level of curiosity and hard work will make him to be extremely valuable and highly productive in any area he chooses to work on.

**Blythe:**

**Differentiation Statement:**

Blythe was instrumental in guiding the allocation of several hundreds of million dollars of budget (~$700 MM) for Oncology. These are complex initiatives involving not only expertise, data, analytics and project management skills but also more critically selling the story, convincing myriad of stakeholders with different views and gaining their trust. Blythe excelled here. Another key contribution is managing the development of complex Mkt Mix data lake involving several vendors and strong collaboration with HHIAD data engineering team. Whenever PO team faced resource constraints, Blythe was instrumental in taking over multiple new projects and support the team with hard work (several nights and weekends) - that is, she was bold to always jump in and help others.

**Demonstration of Transformational Leadership Behaviors and Ways of Working:**

Blythe demonstrated extraordinary initiatives and leadership consistently. For example, complex DOMINO process involves multiple stakeholders from Oncology team (SVP, VPs, AVPs, tumor leads, promotion leads, finance, analysts etc) and all of them are vying for their share of budgets – in such a complex and sometimes cut-throat environment, Blythe has earned all of their trust by consistently showing relevant data, analytics and insights. She has gained such a trust through her expertise and leadership that once she talks everyone listens and generally agrees. Her innovative approaches to problem solving, silos to networks and withholding to sharing behaviors are gold standard and is consistently appreciated by her stakeholders.

**Business Impact / Key Accomplishments:**

1. $670MM per year Oncology Marketing Budget allocation for 2023 (& 2022) through DOMINO process. In 2022, expanded to include Lynparza, Lenvima, Welireg and many new indications. US Senior OLT were involved heavily.
2. Oncology BU: HCP granular channel investments (~$45MM) through CIA for all brands and tumors. Helped in Tumor Prioritization at National level that set the strategy for the whole Oncology portfolio.
3. Managed implementation of Mkt Mix data lake (collect, transform and summarize several HCP and Consumer channel data) in close collaboration with HHIAD Data Engineering team. A complex multi-year project.
4. Managed Datazymes consultants (~8) and delivery of multiple Mkt Mix models (importantly Keytruda) through close collaboration with Datazymes and ZS. This fed into multiple analysis and provided promotions strategy for multiple brands.
5. Blythe is a subject area expert and a trusted partner and consultant for multiple teams (Brand, DET, HHIAD, IT etc) and helped derive promotional decisions confidently (includes digital, omnichannel, speaker programs etc).
6. Other Key Contributions: Data vendors onboarding and metric evaluations, T/C measurements for influential / new channels, Accelerate measurement designs, DET campaign planning, NBE key inputs for multiple brands etc.

**Stakeholder Quotes**

*“Blythe demonstrated act with urgency, experiment, learn, and adapt, and win as one team ways of working all throughout our time collaborating on DOMINO and presenting output and recommendations to leaders”*

*Blythe excels in “business solution making, analytical thinking, and project management”*

*“Blythe is a great relationship and trust builder. I feel confident bringing my thoughts and concerns to her and appreciate her sincere listening and guidance. Blythe is open minded and collaborative. She listens to all ideas and always brings her suggestions to the table. Blythe has done a great job navigating competing team needs and difficult conversations. she is solution focused. “*

**Closing Remarks:**

I am very lucky and happy to have Blythe as the promotion optimization team member. I am fully confident that her extensive experience, hard work, highly collaborative style and ways of working will continue to be extremely valuable and highly productive in the ever evolving future landscape.

**Michael**

**General comments**

Michael’s stellar contributions on application of deep learning methods to optimal promotions planning (Next Best Engagement) while he was working as an intern in 2020 made us realize the huge value he could bring to Merck. I am glad that he accepted the offer from promotions optimization / commercial investments optimization team and joined the team in January of 2021. Because of resource needs and constraints within the team, he was thrown directly into one of the high impact and high visibility area of the promotion optimization team – managing Keytruda consumer promotions practice area with several hundreds of millions of dollars in promotions investments each year. In general, these roles are taken after many years of relevant experience. In this new role, Michael managed, developed appropriate analysis methods, developed various statistical and operations research models, guided multiple teams on relevant analysis and more importantly consulted with and managed the Oncology consumer, brand and media team leaders’ expectations and communications – no easy task particularly when one is new to the field.

Michael performed as well as it could be in the new and big responsibility area and with limited experiences he had coming in. As a manager, I acknowledge how difficult it could have been to take such big responsibilities and highly appreciate all the work that Michael accomplished.

Michael is highly knowledgeable in causal inference space and is always willing to learn anything new to him – including business issues and the nature of consumer promotions. Michael brought in several recent academic research and outcomes in causal inference and integrated some of the key innovations in this area into promotion optimization area. Such methodology infusions are highly appreciated by the team. Michael is very happy and enthusiastic to teach others and develop others in the team. Michael showed the team that there are multiple areas to evolve methodologically. I have come to learn a lot from him personally and the team would love to continue this learning path with him (when he has time). There is so much to improve as a team and Michael could be an important catalyst to guide the process.

Some of the developmental areas I could see for Michael are (a) get more comfortable with uncertainty in data and business issues and (b) tailor short and sweet key takeaways according to the needs of the audience. I am very confident that as Michael gets more experience, these areas will naturally develop.

**Key 2021 projects and initiatives**

* **Supporting Business Use Case for Keytruda TV**

Michael helped to make the business case for investing on TV ads for Keytruda by modelling, collating and triangulating several analyses. This is a high investment (~$100MM yearly investment) and high visibility (Oncology Consumer leaders, Senior Leadership and CEO Rob Davis) initiative and Michael managed the analysis and Oncology consumer leadership quite effectively and represented business value of TV ads very well. Michael was also instrumental in evaluating alternate TV data sources to enhance the analysis and enable more granular TV planning in forthcoming years. His evaluations has initiated a new 2023 formal project to get deeper into one of the vendor’s data (VideoAmp).

* **Marketing Mix, Consumer promotion impact assessments and Budget Planning**

Michael guided ZS consultants to build Keytruda Consumer Marketing Mix models. This intense work stream went beyonf guiding ZS consultants. Michael developed and validated marketing mix models independent of ZS and more importantly applied art to triangulate various consumer promotion impact workstreams by managing several vendors (ZS, Crossix), Oncology consumer teams, Merck Media team and internal stakeholders such as Datazymes and Merck Promotion Optimization team members. This important work informed ~$200MM investments and involved evaluating ~30 consumer channels and media vendors.

Michael extended the above work to apply operations research techniques to determine optimal consumer channel budgets, investments and resource allocations that would maximize impactable revenue under various business constraints. These are highly valuable work for Keytruda consumer team as it directly impacts several hundreds of millions of dollars in revenue and savings.

* **Strategic Initiatives**

Lung Precision Marketing and Arcadia Text Messaging campaigns were among some on the important strategic initiative by Oncology consumer team to evaluate effectiveness of such precision targeting and consumer reach out strategies. Michael played a major role in evaluating these programs in terms of business impacts. The challenges here were enormous in terms of identifying relevant data for analysis, dealing with noisy and partial datasets and also developing innovative methods to measure their sales impacts. Michael implemented innovative causal impact methods (Synthetic controls) for Lung Precision Marketing measurements and guided future investments. Arcadia program had data challenges and Michael evaluated and guided the team on possible best approaches given the data limitations.

* **Innovations**

Michaels’ strong knowledge and extensive experience in causal inference methods has led to development of key innovative methods for Global Human Health organization. Supporting Health Map initiative is one such example. Health Map is an important initiative to use consumer data to measure multiple consumer channels internally within Merck (currently Merck depends on external vendors such as Crossix). Michael created the framework and codes to optimally match treated and control patients by implementing novel cutting edge techniques such as BigMatch, appropriate distance metrics and risk set matching techniques. These paves the way for better matching techniques using large datasets and more importantly assess the consumer promotions in more objective and statistically appropriate academically researched ways. These techniques will be looked at in more depth when Health Map initiative develops further.

**Stakeholder feedbacks**

Michael took point on several key Keytruda deliverables. He is open minded, always willing to learn, self-aware of limitations, pulls in leadership when needed and is nice and easy to work with. Michael brings in growth mindset by coming up with different and new approaches to traditional analysis. Michael is highly collaborative and works well with other teams.

Some of the areas for continual development would be to reduce details in some of the communications, get to the point on key takeaways and tailor the messages succinctly to corresponding audiences. Another area, that is more relevant to commercial space, is to get comfortable with lack of data and information particularly when there are lot of variables in play. The stakeholder is confident that through more experiences in coming years, these characteristics will naturally develop.

**Closing Remarks:**

I am happy to have had Michael as the promotion optimization team member. I am also supportive of his interest in choosing to join the MRL team within Merck to expand and explore his areas of interest. I am confident that his high level of curiosity and deep knowledge in his research area will make him to be valuable and productive in his new endeavors. I am also looking forward to learn more on methodologies and research areas from Michael that could be extended to commercial side of the business.