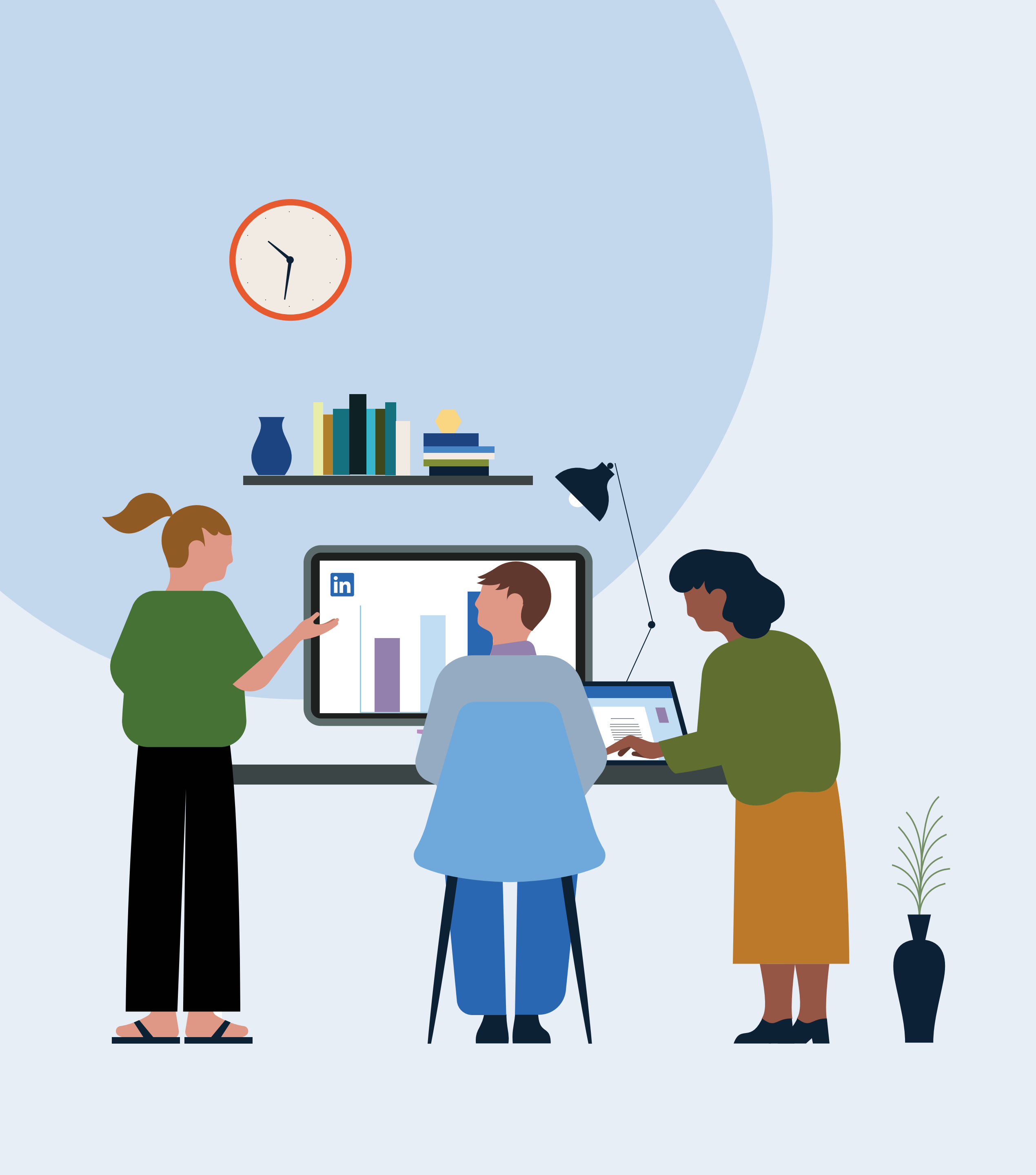# LinkedIn Business Operations (BizOps) Case Guide

# What's in this deck?

- What is a case interview and what are we looking for?

- Approach to a case
  - **A** Clarify what you're solving for
  - **B** Structure your approach
  - **C** Form a hypothesis, leverage data to test it
  - **D** Recommend a path forward

- Pitfalls we see in case interviews

# What is a case interview?

# What is a Case Interview and what are we looking for?

Case interviews showcase the problems and challenges that we face and solve on a daily basis. We love this format because it lets us see you "in action", but also allows us to share with you the types of problems BizOps is asked to solve.

Our team will ask you a question that reflects the work we do. We will be looking to understand:

- Your approach to clarifying and solving the problem, and whether this approach is structured

- How analytical and creative you are in your thinking

- Your usage of data to quantify results and recommendations

- How you convey concepts, ideas, analysis, recommendations

- Your viewpoint on what it takes to operationalize your recommendations

# What could a case question actually look like?

### Profitability

- Dell is one of the largest computer manufacturers in the US. Over the past few years, Dell has grown revenue and market share, however net income has eroded. Why has net income declined?

- Tesla manufactures electric vehicles and has expanded significantly over the past few years. Despite high growth, it is seeing declining margins. How would you diagnose the issue and fix it?

### Market Sizing

- Lyft wants to offer a free promotional ride to all riders in Manhattan. How would you estimate the total number of promotions that Lyft will deliver?

- The state of California is trying to understand the number of riders who would use a high-speed rail between San Francisco and Los Angeles. How would you estimate the number of riders?

### Investment

- NBC is considering bidding for the rights to broadcast the English Premiere League. What are all the relevant factors in considering this decision? If NBC wants to move forward, how much should it bid?

- Lynmar Estate Winery is a boutique winery in Northern California. They are investigating whether or not they should purchase 50 acres of nearby land. How would you evaluate this decision?
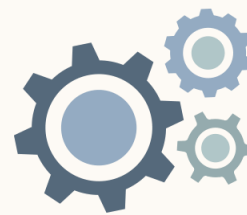
### Operational Improvement

- Netflix, a content streaming company, is experiencing high customer churn. How would you go about understanding why churn is high and what would you do about it?

- Instacart, a grocery delivery company, has seen increased delivery times in the San Francisco market over the past few months. What is going on?
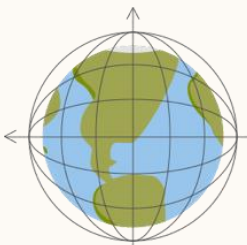
### Market Entry

- DoorDash, a food delivery platform, is looking to expand its services to include pharmaceutical delivery. How would you think about this new opportunity?

- Uber is considering entering the Japanese market with its ride-sharing platform. How would you evaluate this opportunity?
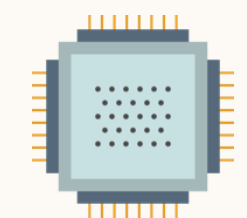
### New Product Launch

- LinkedIn is considering developing and launching a new standalone messenger application to compete with Facebook Messenger, what are the key considerations here?

- Robinhood offers commission-free investing. They are assessing whether to create a "premium" offering with access to financial advisors. What are your thoughts?

# Approach to a case

**A** Clarify what you're solving for

**B** Structure your approach

**C** Form a hypothesis, leverage data to test it

**D** Recommend a path forward

*Note: The below is not meant to be directive nor exhaustive, but an example of areas you may want to understand before diving further into a case study*

A. Clarify what you're solving for

# Clarify what you heard and what you are solving for

*Case questions can be vague and ambiguous.  This mimics the types of questions we get in BizOps.  Before you can even begin to solve a problem, you must understand the question you're trying to answer. Feel free to ask follow-up questions and clarify your understanding before diving in.*
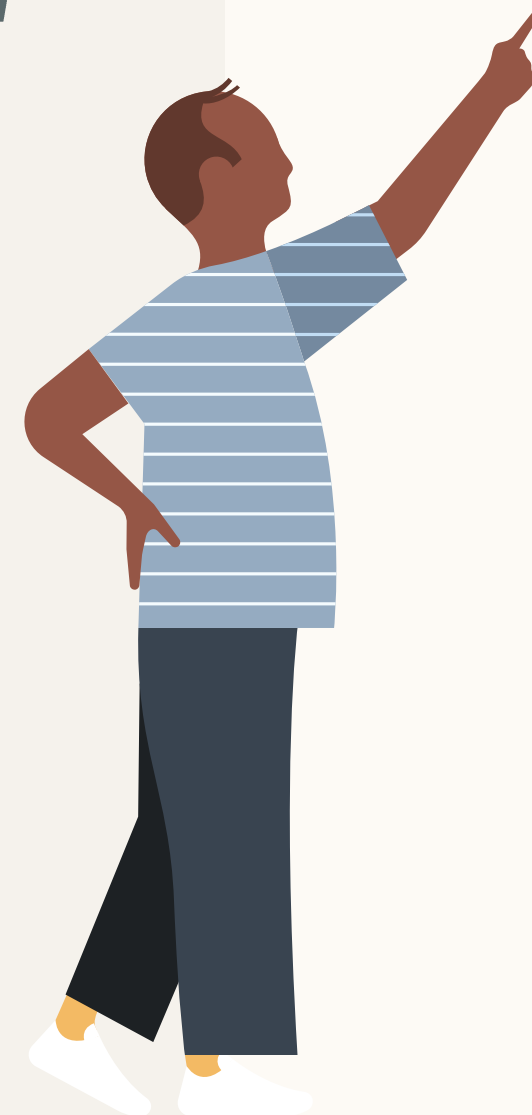
## Did you understand what you just heard?
*Before diving into the case, make sure you actually understood all parts of the prompt.  Is there terminology that you didn't understand? Are there metrics that you need to clarify the definition of?*

## Can you identify the root of the problem and its type?
*Many times we get very vague questions/statements.  **You need to decompose these statements or questions into a subset of problems to solve.** Understanding what type of question/problem you are being asked will help **you think through the right approach and build a relevant framework.**  Consider this – is this problem about profitability, market entry, revenue growth, cost cutting, an investment, M&A, new product introduction, etc.?*

## Do I understand the objective and are there other considerations?
*Beyond understanding the type of problem, understanding the objective and other key considerations is also critical – Is there a certain profitability target we are looking to achieve? What is the timeline to achieve our growth targets? Understanding specifics like this will influence what is possible – e.g., if you need to enter a new market within the year, acquisition may be a more viable option then building from the ground up.*

*We asked three members of our BizOps team...*

# "If you received a vague prompt, what questions would you ask to clarify it?"

| *Example Prompt* | *We are looking to double our DAUs (Daily Active Users), what are your thoughts?* | *Our COO runs into you and says, "hey, I heard our average customer churn is 60%, seems high to me". What're your thoughts?* | *Job slots is a $1B product that operates on a price per slot model. We are considering a pay on delivery model. How would you think about this?* |
|---|---|---|---|
| **Ben Maldonado, Manager, BizOps – Trust** | • What is a DAU and how is a DAU defined? <br><br> • Why are we looking to double DAUs? Is there a specific goal in mind – revenue/profit target? <br><br> • Do we have a specific type of user/geography that we're interested in or just anywhere? | • What is our objective? Is it to diagnose where the churn is and understand why it is high? <br><br> • Do we have a churn target in mind? <br><br> • Is there a specific time horizon we are targeting? | • How does the price per slot model work? <br><br> • How would a pay on delivery model work? <br><br> • Is there an objective behind this consideration – revenue / profit target? |
| **Afiya Hosten, Manager, BizOps – Consumer Marketing** | • Is there a priority segment or geography that we should focus on? <br><br> • What are the effects of doubling DAUs? What larger metrics or business goals does this serve? <br><br> • What is in scope (E.g. marketing, product, etc.)? | • What has our historical churn rate been? <br><br> • What is the industry standard for churn? <br><br> • Is something happening in the macro-environment that is causing this? | • What are the key differences between the two models? <br><br> • Is there an industry best practice on this? How do our competitors do this? <br><br> • How will this impact short and long-term revenue? |
| **Melanie Brown, Associate, BizOps – Content Creators** | • What's the timeline for this goal? <br><br> • What's the baseline that we're doubling? <br><br> • Is our goal net of organic growth? <br><br> • What level of investment are we prepared to put behind this initiative? | • Can you clarify what specific business you've heard this churn rate at so I can orient myself? <br><br> • Is 60% churn higher than benchmarks? <br><br> • Is this churn uniform across geographies / users? | • Is the goal to conduct a cost / benefit analysis on transitioning to a pay on delivery model? <br><br> • Are there any non-financial considerations I should be aware of? <br><br> • How do each of these models work? |

# *Let's Walk through an Example!*

A few years ago, Facebook rocked the app world by introducing the Facebook Messenger app. Their goal was to dominate the market for the way people communicate, replacing things like texting and emailing. Although the app initially received poor reviews as users were forced to switch to it in order to message their friends on Facebook, it eventually became a hit with over 900M users worldwide.

Given that LinkedIn also has messaging on its platform, your task today is to evaluate whether a similar standalone messenger product would be profitable and viable for LinkedIn. What factors would you consider in this decision?

# "Before you even get into this problem, what would you want to know?"

## Peter Ayala
### Associate, BizOps – Ads Marketplace

- *Are we concerned about any other measures of app success like member adoption or retention rates?*

- *What is the timeline to achieve profitability? Do we have to achieve profitability the first year we launch?*

- *How does the current Messenger model make money?*

**Education:** Harvard University, BS - Statistics, Computer Science
**Prior Exp:** Consulting, Bain & Co.

## Stephanie Ding
### Associate, BizOps – Learner Marketplace / Experience

- *In addition to profitability, are there any other goals that LinkedIn's has for launching a standalone app?*

- *What is the timeframe in which we would need to achieve these goals?*

- *Would this standalone app replace in-platform messaging entirely?*

**Education:** Columbia University, BA – Neuroscience and Behavior
**Prior Exp:** Consulting, McKinsey; BizOps, Springboard

## Jeff Levy
### Manager, BizOps – LTS GTM

- *What are LinkedIn's primary objectives for launching a standalone app? How do we measure success?*

- *Have we defined what qualifies as 'viable' or should I develop my own point of view?*

- *Would launching a standalone app replace in-platform messaging (similar to FB) or is this an open decision?*

**Education:** Lehigh University, BS - Integrated Business and Engineering, Industrial Engineering
**Prior Exp:** Strategy & Operations, WeWork

# Structure your approach

*Often known as putting together a "framework", applying a structured approach enables you to logically tackle the case study. This helps ensure you're considering all facets of the problem.*

There is no one perfect framework, however, a good framework will allow you to solve a problem in a structured, logical way.

1. Frameworks should be MECE (mutually exclusive, collectively exhaustive), meaning that the framework you put together to solve the problem should include components that cover the entirety of the problem (collectively exhaustive), but each component should not overlap with another (mutually exclusive)

2. Frameworks should be tailored to the problem you are solving for – e.g., Using a profitability framework (i.e., revenues & costs) is not the right approach if the problem you are looking to solve is all about revenue growth. This is why it's key to start with Step A : "Clarify what you are solving for" to ensure you understand the type of problem

## "What framework would you use to solve this problem?"

1. Will it be economically viable (will it be profitable directly or indirectly)?
- Revenue Drivers
  - Quantity - Addressable market (# of messages, % adoption, messages/member etc.)
  - Price - Monetization model (pay per transaction or flat fee or ads based or even free that would result in boost -> % lift)
  - Net of any cannibalization (e.g. brands directly targeting through messenger rather than Feed ads)
- Cost Drivers
  - Development, GTM, maintenance costs etc.
- Opportunity Cost
  - Alternative use of capital - Could we be investing in another product that has better economics?
  - Cost of not launching this product
2. Is it complementary/additive to LinkedIn's overall strategy?
- Company/Product
  - Business model - Will this be a stand-alone monetization vehicle or an entry point to broader LI providing boost to rest of the business?
  - What does the Product look like? Do we have the right expertise to develop it?
  - Will it cannibalize existing products?
- Customer
  - Which customer segments are we going after?
  - Are there specific verticals or geos that could get more value from the product?
  - How do we target them?
- Competition
  - Do competitors have similar products? Did they result in significant profit or boost to the business? What can we learn?
  - Do we expect to steal market share or expand the pie?

## "Where would you go from there?"

- As the question directly delves into profitability, I would start with the economic viability. What are the various profitability drivers we need to know about – quantity, price, cannibalization effects, costs and not to forget the opportunity cost?
- However, before driving to any conclusions, I would want to know more about the strategic implications and what does it mean to the LI business as a whole. Especially as the profitability is tied to the business model, it is important to explore it further and understand how this product fits into the current strategy
- I would explore each of the branches of the tree to build up to the answer, asking for additional information and data points from interviewer to go through each branch

# Bharathi Kongara

Sr Manager, BizOps – LMS Product
Customer Experience

**Work Experience**
Strategy and Business Operations, HPE
Consulting, Kearney

**Education**
University of Michigan, Ross – MBA
JNTU Hyderabad – BTech CSci. & Eng

**What's not on your LinkedIn Profile?**
I've almost started a crème brûlée joint with my business school tuition

## "What framework would you use to solve this problem?"

### Economic Considerations

#### Revenue

**Price:**
- Monetization Strategy? Will we sell ads? InMail subscription?

**Quantity:**
- Market Size total Q (likely a tops down method starting with total members)

#### Costs

**Product Build and Maintenance**
- R&D HC to build, maintain, and improve
- Server costs to maintain

**Go To Market Costs**
- Marketing material and advertising costs
- Sales Headcount to sell

### Strategic Considerations

#### Product Market Fit

Is this something our customers want and will they use it?
- Why do members use messaging on LinkedIn?
- What purpose does a standalone app serve for our members?
- What kind of download rate can we expect?

#### Competition

Why did Facebook create a separate app just for messaging?

Do we have the same value proposition to members to download a standalone app?

#### Fit with LinkedIn

Synergies with LinkedIn Ecosystem
- Will this drive increased engagement and eyeballs across the platform?

## Johnson Lee
Sr Manager, BizOps – LMS GTM

**Work Experience**
Consulting, Boston Consulting Group
Accounting/Audit, Ernst & Young

**Education**
Duke University, Fuqua - MBA
UC Davis – BS Managerial Economics

**What's not on your LinkedIn Profile?**
I almost majored in piano performance in college

## "Where would you go from there?"

- I always like to start with the economic considerations. Besides the fact that this case asked about profitability, I always want to know whether a business decision is positive or negative ROI (to the extent that it is possible). To do that I know that I need to understand Price * Quantity to get revenue, as well as the Costs associated with building this. To do that, I need to determine how we will make money (monetization model), market size the total number of users, and then understand costs.

- Once I understand the economics, I look to understand the strategic considerations – 1) Sure the economics may look good, but is this something our customers even want? 2) Why build this and why did our competition build it? 3) Does this product fit in with LinkedIn as a brand? Are there additional synergies across the ecosystem?

## "What framework would you use to solve this problem?"

1. Will it be profitable? (Revenue – Cost)

*Revenue (Price x Volume)*

<u>Volume</u>: get to approximation of # of messages
- Addressable Market: Understand current messaging adoption & potential lift from standalone app (investigate if FB saw a % lift in activity when moving to standalone app as a proxy)
- Growth: Do we see this addressable market growing / shrinking based on other LinkedIn initiatives, customer insights, competitive movement, etc.

<u>Price</u>: get to approximation of $$ / message or other monetization approaches
- Current LinkedIn messaging economics: what's the current $$ / message?
- Understand how this changes with a messenger app: could we charge more? Different monetization models? (e.g. ads)

*Cost*
- Engineering costs to develop new app
- Trust, safety, privacy programming / implications of standalone messaging app
- Opportunity cost – could LinkedIn invest time/$ into something else with higher financial & strategic returns?

2. Is it a viable strategy for LinkedIn?
- Does Cannibalization of current business model / implications of engagement on LinkedIn platform if driving traffic to standalone app
- Does this strategy align with LinkedIn's vision and mission? Is it member-centric?

## "Where would you go from there?"

- Approach is structured such that each major piece of analysis is set-up like a yes/no question – the answer to those questions moves us closer to a recommendation

- Once I outline the approach with my interviewer, I'll start digging into the sub-prongs (e.g. volume) to get the information I need from the interviewer to push the analysis further

- For example, in order to calculate revenue I need to understand LinkedIn's current messaging pricing, and volume – so I'll prompt a conversation about this with the interviewer and he/she will provide data I'll need to conduct this analysis. Once I conduct analysis with the data given, I always go back to my framework to ensure I've answered the key questions to reach a recommendation

# Alexandra Ruby

Manager, BizOps – LTS GTM

**Work Experience**
Consulting, Accenture
CoS / Rotational Program, Capital One

**Education**
Northwestern, Kellogg - MBA
Cornell – BA Industrial & Labor Relations

**What's not on your LinkedIn Profile?**
I've been to every South American country except for Ecuador and Venezuela!

# Form a hypothesis, leverage data to test it

*Once you have your framework formed, think about where you would begin – what's your number one hypothesis on what to do, where the value is, or what the crux of the question is?*

**Have a hypothesis for what you think the top questions to answer are in order to solve the problem.** For example, if this is an investment question, the first hypothesis to test may be that the economics and ROI of this investment are positive.

Based on your hypotheses, **determine the analysis you would perform and the data you would need.** For example, if we have a hypothesis that entering into a new geography is profitable, we may need to perform a market sizing analysis. As part of that, you would need to make assumptions on the total addressable market, the price point at which products could be sold in that market, market capture, and costs associated with entering the market.

**Always be structured with your analysis approach.** Oftentimes, setting up the analysis with the appropriate levels of detail and assumptions is far more important to us than doing the analysis and getting the "right" answer – this can be analogized to high school math exams when showing your work on was usually worth more points than having the right answer.

*Now, back to our example!*

To assess whether this product is profitable, I would want to first size the market to understand how many individuals currently use LinkedIn Messenger. Then, I would want to understand how many users would actually download and use the LinkedIn Messenger app. Lastly, I would want to know how to monetize it.

That sounds like a great approach, what information would you like?

Let's start with sizing the market. I ultimately need to determine how many members would download and use this app so I want to break it down as follows:

- I will start with the total # of members on LinkedIn as my total addressable market
- Then, I need to understand how many LinkedIn members currently use our messaging function. I assume only the most active/engaged members use our messaging function so I will need to make assumptions on how many members are active
- Lastly, I will need a download rate as not all active users who use messaging will download the app

Great, here's some information for you and good job on the member engagement insight! Let's assume we have 650M members. We have 3 tiers of member engagement – high, medium, low – assume 50M, 250M, and 350M in each tier, respectively. Assume that 45%, 25%, and 5%, respectively, of each tier currently use LinkedIn Messenger. And lastly, assume across all LinkedIn Messenger users, there is a 60% download rate.

## Step 1: Calculate # of active Messenger Users

| Active on LinkedIn | # of members | % that use LI Messaging | Total Active LI Messenger users |
|---|---|---|---|
| High | 50M | 45% | 22.5M |
| Medium | 250M | 25% | 62.5M |
| Low | 350M | 5% | 17.5M |
| | | | 102.5M |

## Step 2: Calculate # active members that will download

| Total Active Messenger users | Download Rate | Total Expected Downloads |
|---|---|---|
| 102.5M | 60% | 61.5M |

**Candidate:**

To begin, I need to calculate the # of active Messenger users. I will take the number of members in each "tier" and multiply that by the percentage that use LinkedIn Messaging to get the total number of active Messenger users.

Next, I will calculate the total # of active members that we expect to download the LI Messenger app by multiplying the download rate by the total active Messenger users. It looks like we expect around 61.5M downloads.

*Candidate*

*Interviewer*

Great question! I see a few ways that we can monetize this product:
1. Advertising revenue:
   - On the LinkedIn Messenger app pushing ads as banners or pop ups.
   - Increased engagement with LinkedIn products could increase engagement on the main platform, thereby increasing delivered ads.
2. Sponsored InMail – By increasing users on LinkedIn Messenger, this will increase the engagement with Sponsored InMail. This means more opened messages, better conversion, which could lead more customers to purchase Sponsored InMail.
3. Charge for the purchase of the app, although I wouldn't recommend this.

Sounds good, I can go ahead and calculate the incremental revenue

Great, 61.5M members sounds about right. Now that we know how many members may download the app, how would you think about monetizing it?
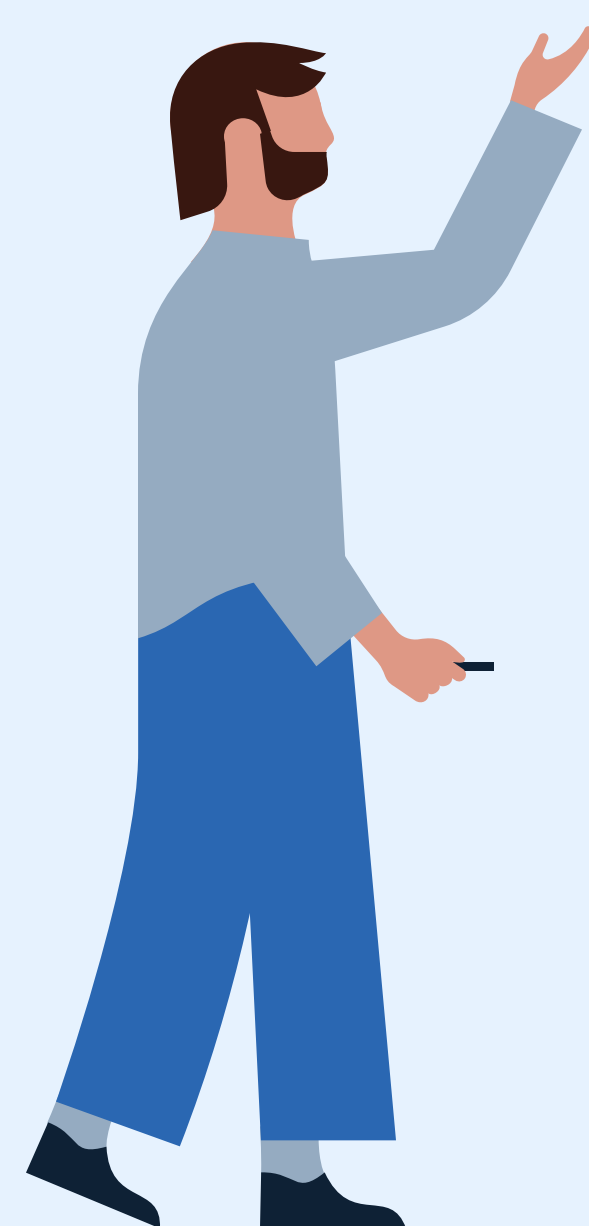
That sounds about right! Let's assume we anticipate this free app making money in only one way: selling more Sponsored InMail because the # of views and opens will increase (also known as the conversion rate).

We currently sell 5M Sponsored InMails a year and see a 0.5% conversion rate. Our revenue is simply the volume of Sponsored InMail multiplied by (1 + the conversion rate). If we see a 10% increase in the conversion rate due to the new app, and consequently a 20% increase in the Sponsored InMail volume purchased from us, how much incremental revenue will we have in the first year?

| Step 1: Calculate # of active Messenger Users | | | |
|---|---|---|---|
| Active on LinkedIn | # of members | % that use LI Messaging | Total Active LI Messenger users |
| High | 50M | 45% | 22.5M |
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| Low | 350M | 5% | 17.5M |
| | | | 102.5M |

| Step 2: Calculate # active members that will download | | |
|---|---|---|
| Total Active Messenger users | Download Rate | Total Expected Downloads |
| 102.5M | 60% | 61.5M |

| Scenario | # of Users | Conversion Rate | 1 + Conversion Rate | Revenue |
|---|---|---|---|---|
| Status Quo | 5M | 0.5% or 0.005 | 1.005 | $5.025M |
| With App Launch | 5M * 1.2 = 6M | 0.5% * 1.1 = 0.55% | 1.0055 | $6.033M |
| Incremental Impact | +1M | +0.05% | +0.005 | $1.008M |

To Calculate the incremental impact, I will compare the total revenue under the status quo vs. after we have launched our app. It looks like we would see ~$1M of incremental revenue from developing a LinkedIn Messenger app.

Although the ~$1M is positive, this is a small amount. Further, we have not even considered costs to build this which will likely exceed $1M. Unless there are additional revenue streams or other significant positive outcomes, I don't see this being a prudent use of resources.

This looks correct to me, How do you feel about the results?

*Candidate*

*Interviewer*

# Recommend a path forward

*The work we do is often with senior leaders who ask us to solve difficult, ambiguous questions. At the end of the day, we act as a strategic advisor and make data-backed recommendations based on our findings.*

Think of your recommendation as the classic scenario – "you're riding in an elevator with Ryan, our CEO, and he asks you what your recommendation is".

1. A recommendation should lead with the answer. Be crisp, concise, structured, and have conviction in your recommendation.

2. Many times, you will not have the perfect data nor all the data that you want. This happens as part of our daily job and we sometimes make or recommend decisions with the best available data supported by educated assumptions.

3. If there are risks involved, additional analyses, and/or next steps that you would want to explore, identify these as well.

4. It is ok to say "no". Many times, candidates assume the answer is always some form of "yes". This is not true. In BizOps, we are asked to answer hard questions and although numbers can look attractive, there are always a myriad of additional factors to consider that could impact our recommendation – e.g., Is this putting our members first? If we do this, will this impact the LinkedIn brand? Is the ROI too little and are these resources better deployed elsewhere?

So, let's say you happen to be with Ryan Roslansky, our CEO, in an elevator and he asks you for a quick update. What would you say?

I would recommend that we do not proceed with developing and launching a LinkedIn Messenger app for two key reasons:
- First, people use LI messenger as more of an introductory channel of communication rather than having ongoing conversations. This usage behavior needs to be addressed before we build the standalone app.
- Second, at present, we would only realize $1M in incremental Sponsored InMail revenue and this does not take into account the cost of development as well as the opportunity cost to deploy these resources elsewhere.

Unless our platform evolves as a medium for ongoing conversation and we identify further revenue streams, this would not be a prudent investment.

Awesome, thank you!

| Scenario | # of Users | Conversion Rate | 1 + Conversion Rate | Revenue |
|---|---|---|---|---|
| Status Quo | 5M | 0.5% or 0.005 | 1.005 | $5.025M |
| With App Launch | 5M * 1.2 = 6M | 0.5% * 1.1 = 0.55% | 1.0055 | $6.033M |
| Incremental Impact | +1M | +0.05% | +0.005 | $1.008M |

*Candidate*
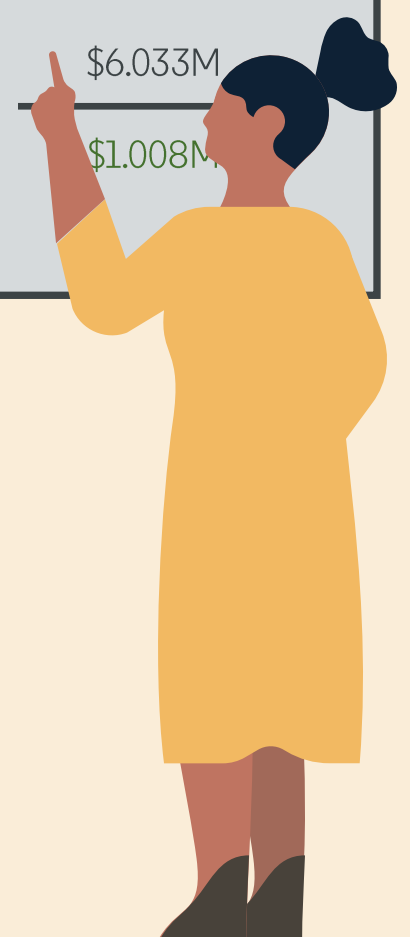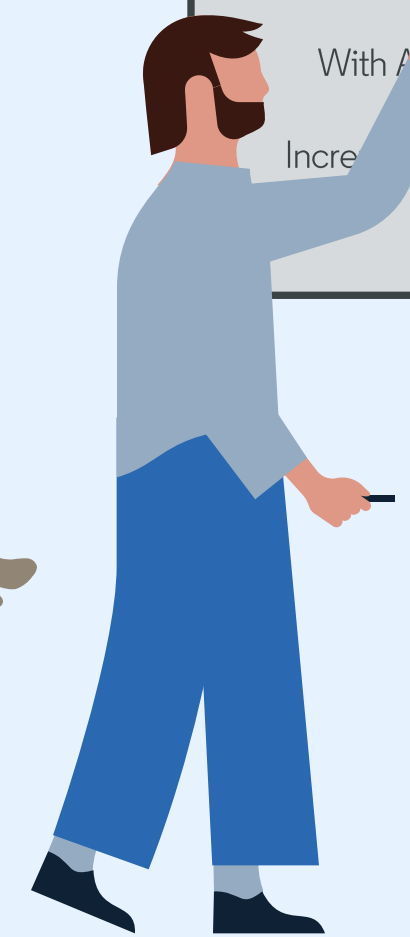
*Interviewer*

Pitfalls we see in case interviews

# Hear from three of our interviewers some of the most common pitfalls they see candidates fall into

## Ally Byer
### Sr Associate, BizOps – LSS Product

*At the conclusion of the case interview, when asked for a recommendation, some candidates give a long preamble before getting to the recommendation itself. Be "answer first" in your communications and then have a clear reason for why you are/are not recommending something. Crisp, structured communication is extremely effective.*

**Education:** Duke University, BA – Public Policy
**Prior Exp:** Consulting, EY - Parthenon
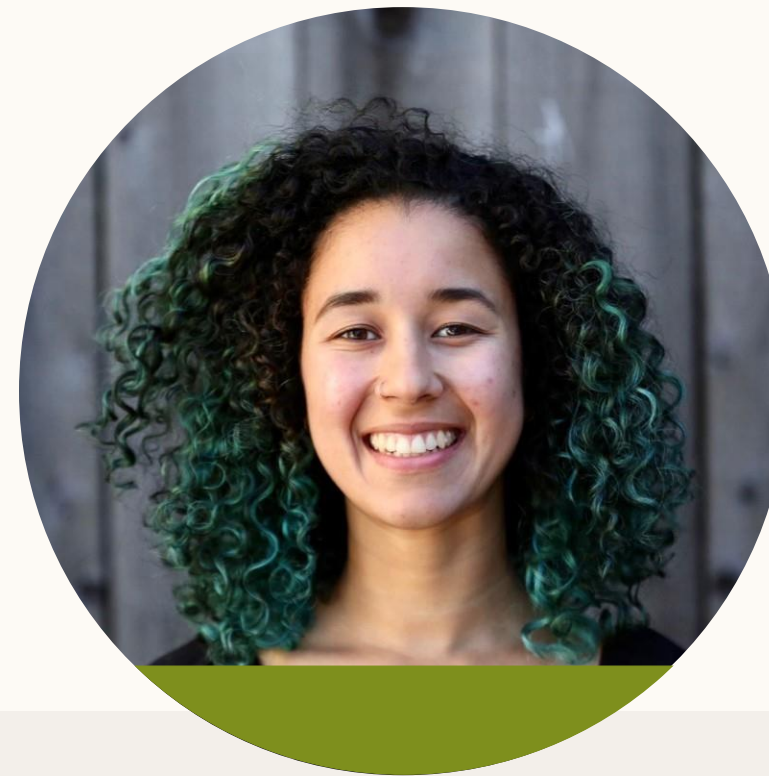
## Kat Jimenez
### Sr Associate, BizOps – LTS GTM

*One of the biggest pitfalls I see with candidates is a lack of structure in the initial phases of the case. I am looking for a well-defined structure and framework to show that the candidate is thinking expansively (while at the same time being hypothesis driven about which one of the buckets or factors, they want to dig into further).*

**Education:** University of Pennsylvania – BA Philosophy, Politics and Economics
**Prior Exp:** Consulting, Accenture

## Shreyance Mandaliya
### Sr Associate, BizOps – Transformation

*A common pitfall is that candidates answer brainstorming questions without taking any time to organize their thoughts. This often leads to an unstructured laundry list of ideas. It's 100% okay to ask for 30 seconds to think and collect your thoughts before providing a crisp, well-structured response.*

**Education:** University of Michigan, Ross – MBA, Strategy & Finance; BBA Finance & Accounting
**Prior Exp:** Associate, Cornerstone Research