# INSEAD Consulting Club

# Casebook 2021

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# Contents

This document is the **ICC Casebook**, which contains cases contributed by both students and companies. To access the **ICC Handbook**, which outlines the consulting industry and contains step-by-step recruitment tips, please go to the INSEAD Consulting Club Website.

# Contents

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# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J), Winner of BCG Case Competition 2021 (1st place)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 4 |
| **Difficulty level – Creativity** | 4 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Interviewer-led |
| **Case type** | Profitability, Market Analysis, Qualitative Analysis |
| **Industry** | Public Museum |

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# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Case Prompt

- *Your client is the UK's National Gallery, a government-funded heritage institution with the mission of welcoming the public to explore and experience art and creativity. Due to decreasing available government funding for the creative sector in recent years, the National Gallery has set a goal to grow profitability from commercial activities.*
  ***Question 1:*** *What factors would you like to review to understand how could the National Gallery improve its profitability?*

## Information to be used to answer clarifying questions

- *National Gallery's current income include government funding, donations, and revenue from commercial activities.*
- *National Gallery's costs include two types: 1) costs incurred as a direct result of running revenue-generating business activities, such as staging a ticketed exhibition or catering in its cafes & restaurants, 2) costs incurred while fulfilling its public mission, such as collecting artwork, contributing to art history research and hosting study tours for school children.*
- *Entry to National Gallery is free for all, but tickets are sold for special exhibitions.*
- *National Gallery is open 6 days a week (closed on Mondays).*
- *Objectives: improving profitability (as stated in the prompt), while continuing to fulfil its mission of welcoming the public to explore and experience art and creativity.*

  

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Sample Framework – Q1: Market sizing (data from Exhibit 1)

*Suggested framework: Revenue, Costs, Capability, Risks*

- *Revenue:*
  - *What percentage of current income is generated from commercial activities? What is a realistic future target?*
  - *How is current commercial activity income further broken down, and which activities have potential for revenue growth? (i.e. items grouped under commercial activities could include ticket sales, cafes & restaurants, in-gallery shop retail, publishing, venue hire, commercial filming venue provision, etc)*
  - *Is National Gallery charging visitors for permanent collection or special exhibitions only?*
  - *How price sensitive are museum visitors to tickets and other purchases?*
  - *Could the National Museum further grow its donations and corporate sponsorships?*

- *Costs*
  - *What percentage of costs relate to commercial activities (as opposed to costs relating to fulfilling its public mission)?*
  - *How are costs relating to commercial activities broken down (i.e. cost breakdowns could include special exhibition curation, permanent collection maintenance, marketing, labour, costs from shops, cafes & restaurants, etc)?*
  - *Are there inefficiencies in costs structures that could be tackled to improve profitability?*
- *Capabilities*
  - *Funding: will the National Gallery have sufficient funds for suggested solutions?*
  - *Stakeholder buy-ins: will solutions receive support from key stakeholders (including the government, current corporate sponsors, board members, and key partners)?*
  - *Skillsets: will the National Gallery's current staff have sufficient capability to implement solutions (or capability to secure external expertise for implementation)?*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 1: Sample framework (continued)

- *Risks*
  - *Are the profitability-oriented solutions coherent with the National Gallery's brand image and public mission?*
  - *Are solutions only addressing short term profitability? Or are they long-term sustainable?*
  - *What are the implementation and reputation risks associated with suggested solutions?*

## Guide to interviewer

- *A good answer should identify key factors relevant for both growing revenue and reducing costs to improve profitability. An excellent answer should also consider National Gallery's capability in implementation, and mention that profitability-oriented solutions should be evaluated within the wider context of the National Gallery's public mission.*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 2 – Profitability analysis

- *Whilst entry to the National Gallery is free, tickets are sold for special exhibitions. The VP of Operations is evaluating the possibility of changing the frequency of hosting special exhibitions.*

- *National Gallery currently hosts 4 special exhibitions per year, each lasting for up to 11 weeks (as 2 weeks are required to change display items between exhibitions. Looking at the special exhibition revenue /cost structure in Exhibit 1, do you think reducing special exhibitions to 3 per year is a good idea?*

## Guide for use of exhibits

### Exhibit 1

E.g., Hand out this exhibit with Question #2
Key Insights:
a) Candidates are expected to calculate profitability for each business model
b) An excellent answer should conclude that reducing exhibition frequency drives up profitability, but may conflict with the National Gallery's public mission

### Exhibit 2

E.g., Hand out this exhibit with Question #3
Key Insights:
a) Candidates are expected to notice the 'other international visitors' segment is showing the fastest projected growth, hence focus on suggesting international strategy
b) An excellent answer will also identify risks related to uncertainties concerning international markets

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Exhibit 1: Revenue and Costs of special exhibitions

### *REVENUE*

- *About 500,000 visitors are interested to see each special exhibition.*
- *The first and last week of each special exhibition are the least popular times – each only attracting 5% of interested visitors. The remaining visitors' choice of visit timing is split evenly across other weeks (but some visitors may be turned away if visitor numbers exceed capacity)*
- *Max capacity per week = 40,000*
- *Tickets to special exhibitions sell for $10*

### *COSTS*

- *Each exhibition incurs $3m fixed costs to stage (including costs of acquiring or leasing some artwork from partner museums, costs of engaging experts to curate exhibitions, operational costs of transporting and hanging artworks, etc)*

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# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 2: Sample answers

*Step 1: Calculate the number of visitors admitted to special exhibitions under each model.*

***Current model, with 4 exhibitions per year, each exhibition lasting for 11 weeks***

- *First & last week: 500,000 x 0.05 = 25,000 per week (or 50,000 combined)*
- *Middle 9 weeks: (500,000 – 50,000)/9 = 50,000 (however, only 40,000 per week could be admitted due to gallery max capacity)*
- *Total visitors per exhibition: 25,000 x 2 + 40,000 x 9 = 410,000*
- *Total visitors per year = 410,000 x 4 exhibitions = 1.64 m*

***New model of reduce exhibition number to 3***

- *Each exhibition lasts for 15 weeks [(50 – 2 x 3)/3 = 15] (assuming 50 weeks in a year)*
- *First & last week: 500,000 x 0.05 = 25,000 per week (or 50,000 combined)*
- *Middle 13 weeks: (500,000 – 50,000)/13 = 34,600 (not restricted by max capacity)*
- *Total visitors per exhibition: 500,000 (i.e. all interested visitors are admitted)*
- *Total visitors per year = 500,000 x 3 exhibitions = 1.50 m*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 2: Sample answers (continued)

*Step 2: Calculate revenue and costs under each model*

***Current model**, **with 4 exhibitions per year***

- *Revenue from ticket sales: 1.64m visitors x $10 = $16.4m*
- *Costs: $3m x 4 = $12m*
- *Net profit = $16.4m - $12m = $4.4 m*

***New model of reduce exhibition number to 3***

- *Revenue from ticket sales: 1.5m visitors x $10 = $15m*
- *Costs: $3m x 3 = $9m*
- *Net profit: $15m - $9m = 6m*

***Recommendation:** Reducing the number of special exhibitions from 4 to 3 per year can drive up profitability, as costs are declining at faster rates than revenue.*

***Risks and other considerations***

- *Reducing special exhibition numbers to 3 is in conflict with the National Gallery's wider mission of welcoming the public to explore and experience art and creativity.*
- *Reducing special exhibition numbers may lead to a reduction in overall visitor number, which could impact the National Gallery's other revenue streams (i.e. shops, cafes and restaurants)*
- *Special exhibitions are generally good opportunities for securing corporate sponsorships, hence reducing exhibition numbers may lead to lost opportunities for corporate sponsorship income*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 3: Market analysis

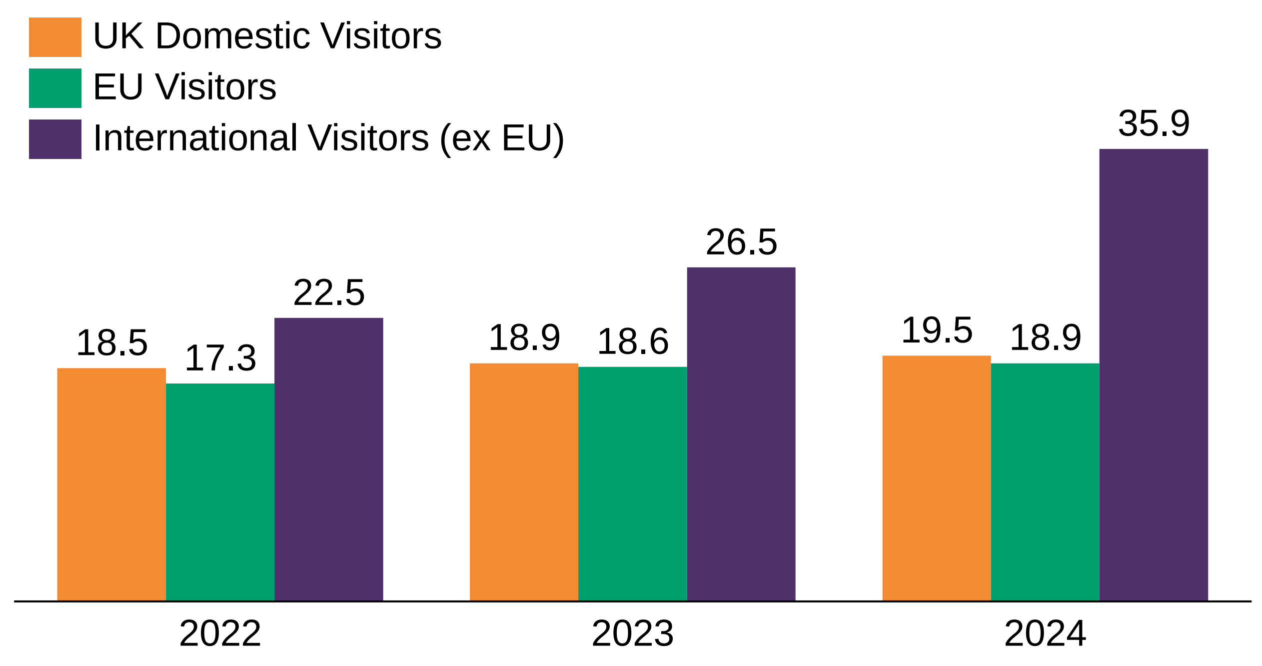
- *Although entry to permanent collection rooms is for free, the National Gallery believes higher visitor numbers leads to alternative revenue sources, such as donations and purchases in its restaurants and souvenir shop. Furthermore, higher visitor numbers could also help the National Gallery to demonstrate its popularity, so that it could charge higher prices for corporate events and filming venue hires.*

- *Exhibit 2 shows the projected growth of visitor numbers for all UK museums combined for the next three years (i.e. post-Covid).*
    - *What recommendation would you give to the National Gallery to most effectively grow its visitor numbers?*
    - *What are risks associated with your recommendations?*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

**Exhibit 2: Annual visitor number forecast for UK museums (in millions)**



# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Question 3: Sample answers

- *Rate of growth is fastest in the international visitors (ex. EU) segment, so recommendations should focus on strategies to attract international visitors. Possible suggestions include:*
    - *Attracting more international visitors by:*
        - *Growing partnerships with tour operators who serve tourists*
        - *Making tourists feel more welcomed (such as employing assistants who speak international languages, or adding more languages to audio guides)*
        - *Growing international advertising to raise awareness*
    - *Use the National Gallery's international popularity to generate additional revenue by:*
        - *Lending its permanent collection items to overseas museums*
        - *Generating 'consultant' fees by helping less experienced museums in other countries curate exhibitions*
        - *Curating and delivering art courses in countries where it is well known in*
        - *Setting up a sister gallery in an overseas location*
- *Risks associated with focusing on international visitors:*
    - *Significant investment, especially when attracting visitors from countries that National Gallery currently has little existing knowledge*
    - *Unreliability: international visitor numbers are affected by many factors including currency exchange rates, travel restrictions, popularity of other tourism destinations, etc*

# National Gallery: Strategy and Optimization (Part 1)

Author: Cecily Liu ('21J)

## Recommendations

*Candidate's final recommendation could include the following points:*

- *National Gallery could achieve its goal of improving profitability through two main methods: portfolio optimization and revenue growth.*
- *Portfolio optimization: reducing the number of special exhibitions improves profitability as costs drop faster than revenue, but this solution conflicts with the National Gallery's public mission.*
- *Revenue growth strategies should focus on attracting visitors from the international visitors (ex. EU) segment, where growth is fastest.*
- ***Risk**: Attracting international visitors requires significant investment, but additional revenue may be unreliable due to factors such as currency exchange rates, travel restrictions, popularity of other destinations, etc.*
- ***Next steps**: Investigate feasibility of attracting international visitors by examining National Gallery's available budget and international markets knowledge; find other opportunities of revenue growth such as educational events, memberships, merchandise, etc.*

# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J), Winner of BCG Case Competition 2021 (1st place)

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# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

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# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

## Question 1: Sample framework (continued)

- *Risks*
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## Guide to interviewer

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# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

## Question 2: Entering a New Market

- *Encouraged by the fast growth of museum visitor numbers in overseas markets, the National Gallery is considering opening a sister gallery China. Please help the National Gallery evaluate if this is a good idea.*

## Additional information (share with interviewee)

- *The number of Chinese citizen who visit museums is about 70m, on average each person visits 3 different museums each year.*
- *Average spend per visit is $2 (including entry ticket plus additional in-museum purchases).*
- *One off investment for the National Gallery to launch a sister gallery in China is $8m. From year one onwards, annual fixed costs at the Chinese sister gallery is $1m and variable costs is $1 per visitor.*
- *National Gallery estimates it could achieve a consistent 2% market share in China.*

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# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

## Question 2: Sample answers

- *Calculations*

*Step 1: Calculate the total size of China's museum market revenue: 70m x 3 x $2 = $420m*
*Step 2: Calculate the National Gallery's revenue forecast per year: $420m x 2% = $8.4m*
*Step 3: Calculate the National Gallery (China)'s contribution margin per year:*

- *The number of visitors at National Gallery (China) per year = 70m x 3 x 2% = 4.2m*
- *Total variable costs: 4.2m x $1 = $4.2m*
- *Total annual costs (fixed + variable) = $1 + $4.2m = $5.2m*
- *Annual profit: $8.4m - $5.2m = $3.2m*

*Step 4: Evaluate whether expanding into China is a good idea:*

- *Profit margin: $3.2m / $8.4 = 38%*
- *Payback period: $8m/ $3.2m = 2.5 years*
- *Recommendation: Profit margin of 38% is attractive, and payback period of 2.5 years signals reasonable risk level; should recommend expanding into China.*

*Risks to consider:*

- *Political: Uncertain China-UK relations may impact visitor sentiment*
- *Cultural: Is a China-based sister gallery actually what local museum visitors want? i.e. Chinese domestic museum visitors may have different preferences to Chinese tourists coming to the UK*
- *Operational: Does the National Gallery have sufficient capability to invest in this expansion, and maintain the quality of exhibitions at its sister gallery going forward?*

# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

## Question 3: Sample answers

- *Potential new digital products include:*
    - ***Virtual Gallery Tours**: enabled by VR technology that resemble in-person experience*
    - ***Art Education**: develop virtual short art courses or summer school programs; partnering with education institutions to run art discussions, art quiz, art competition, etc.*
    - ***Generate royalties from art-themed video/app games**: licensing out its artwork trademarks to game developers to earn additional revenue*
    - ***Monetize special online events**: such as murder mystery, online coffee chats with renowned museum specialists, or online fundraising events*
    - ***Develop virtual membership**: online members pay a subscription to access National Gallery's private archival collection, behind the scenes tours, and more.*

- *Criteria to evaluate feasibility of digital programs:*
    - *Financial considerations:*
        - *Sufficient financial resources for new initiatives' R&D?*
        - *Will the new digital solutions generate enough revenue to justify the costs?*
        - *Will these digital offerings generate revenue even without further lockdowns?*
    - *Non-financial considerations:*
        - *Are these activities consistent with National Gallery's brand and mission?*
        - *Does the National Gallery's staff have the right skills & capability?*
        - *Can the National Gallery maintain competitiveness if other galleries copy its successful initiatives?*

# National Gallery: New Revenue Streams (Part 2)

Author: Cecily Liu ('21J)

## Recommendations

*Candidate's final recommendation could include the following points:*

- *National Gallery could achieve its goal of improving profitability through two main methods: portfolio optimization and revenue growth.*
- *Given high growth rate of China's museums sector, opening a sister gallery in China is forecasted with attractive profitability and payback period.*
- *Additional investment into digital solutions/products is recommended, to satisfy consumer needs in an increasingly digitalized world and hedge against the risks of future Covid-like scenarios that force museum closure.*

- ***Risks:***
  - *Opening a sister museum in China requires significant financial investments and management bandwidth, risking diluting resources away from home market. It is also subject to political, cultural and operational risks.*
  - *New digital solutions may not achieve desired effects due to lack of previous experiences*

- ***Next Steps:***
  - *Investigate financial and management capability of opening China gallery*
  - *Evaluate feasibility and desirability of new digital solutions to prioritize the most promising ones*

# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J), Winner of BCG Case Competition 2021 (2nd place)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 3 |
| **Difficulty level – Creativity** | 3 |
| **Difficulty level – Structure** | 4 |
| **Case led by** | Candidate |
| **Case type** | Turnaround |
| **Industry** | Technology |

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# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

## Case prompt

- The client "Techking" is a 5bn€ multi-national IT provider based in Germany that provides technology and related consulting services to clients from a variety of industries
- Revenues have been next to stagnant for years and profit margins compared to competitors is low
- The CEO – an INSEAD alumnus - has asked you to come up with options on how to turnaround their business and improve profit margins
- He advised you that all previous Consulting companies were "not bold enough" and this is the time for some "big changes" as he otherwise will lose his job

## Information to be used to answer clarifying questions

- Client's offerings includes a wide range of technologies incl. provision of computing power of their data centers, hardware for employees (e.g. laptops) and Software and Consulting
- Client operates all over the world, but focus is Europe
- Client has already executed several smaller initiatives to cut down costs, but impact was minimal
- Client targets at least 15% profitability in 3 years latest and would take a cut on revenue if necessary – current profitability has to be calculated by candidate later
- Profit margins of competitors are between 15% and 25%
- Client is open to M&A activities

# Save the job of an INSEAD alumnus!

Author: Patrick Hammer (’21J)

## Guide to interviewer

- This case tests the candidate on four concepts:
  1. **Profitability:** The candidate is asked to structure a typical profitability issue. Additionally, the case asks for a “bold” recommendation
  2. **Options identification:** The candidate should identify that there at least two options that tackle the issue and come up with a framework
  3. **Brainstorming:** The candidate is asked to assess non-financial considerations incl. risks for recommended option/s
  4. **Combining data:** Candidate to link data from Exhibit 1 and 2 as well from in the two charts in Exhibit 3

## Guide for use of exhibits

### Exhibit 1

Hand out if candidate asks for data on revenues/competition
Key Insights:
a) Client growing the slowest
b) 3 out of 4 competitors with much larger scale (more than 3x to 4x the revenues)

### Exhibit 2

Hand out if candidate asks for competition or M&A activities
Key Insights:
a) All competitors strong in M&A – those with higher M&A activity grow the strongest
b) Client with no M&A activities

### Exhibit 3

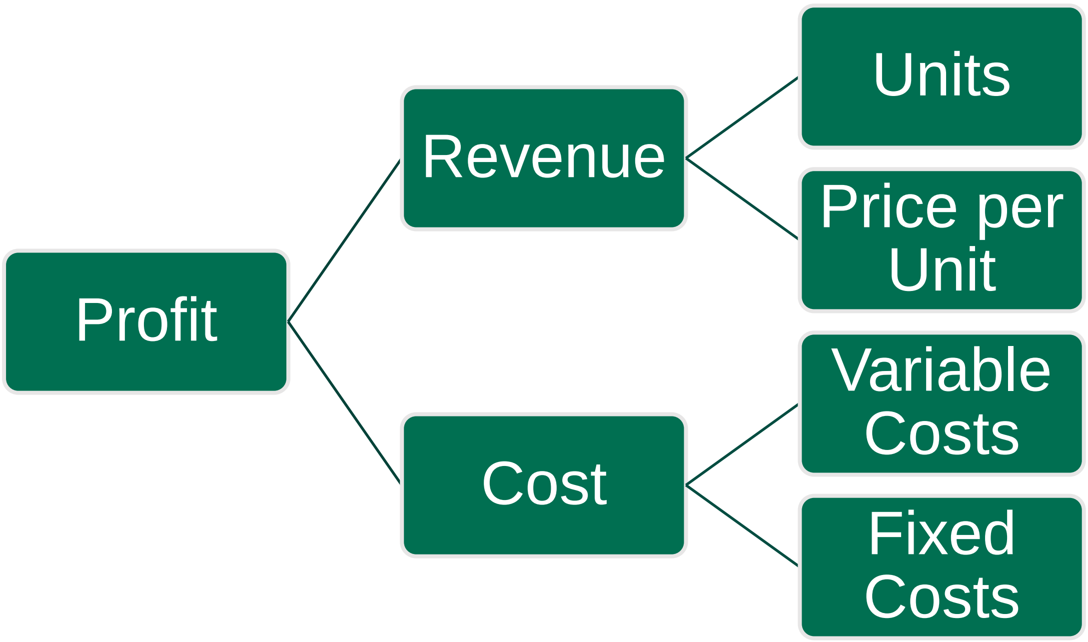
Hand out if candidate asks for split by products/ details on profitability performance
Key Insights:
a) A with significant profitability issue – e.g. divest
b) C and D with strong profitability – e.g. possible focus areas
c) B is performing subpar – e.g. possible divest/ restructure

# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

## Sample frameworks for profitability and additional considerations

For profitability, a standard profitability tree (incl. revenue and costs) can be used




**Additional considerations might include:**

**Markets**
- Which markets are they serving? (>50 countries)
- Is the client's performance significantly different in different markets? (no)

**Competition**
- What are typical profitability levels? (15-30%)
- Are competitors facing the same issues? (no)

**Capabilities**
- What is differentiating for the client? (German brand that people trust)
- What are weaknesses? (client not seen as innovative and haven't managed to turnaround business on their own)

**Products**
- What products does the client offer? (broad portfolio of products that were developed in-house)

# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

## Sample solution & recommendations

- **Sample solution should include at least two options, e.g.**
  - A) Sell product segments that underperform (A and/or B) – *calculation provided*
  - B) Double down on high profitability area e.g. by acquisition (C and/or D)
  - C) Drive bold cost cutting activities
- **Candidate is expected to do a rough feasibility check incl identifying major risks, e.g**.
  - No experience of client in M&A leading to e.g. cultural issues
  - Selling significant part of company might take long and might be painful

## Guide: Good vs Great Case

**A good candidate will cover these points:**

a) Profitability issue arises from poor performance of certain product categories
b) Client is outperformed by competition in growth due to missing M&A activities
c) Recommendation with risks

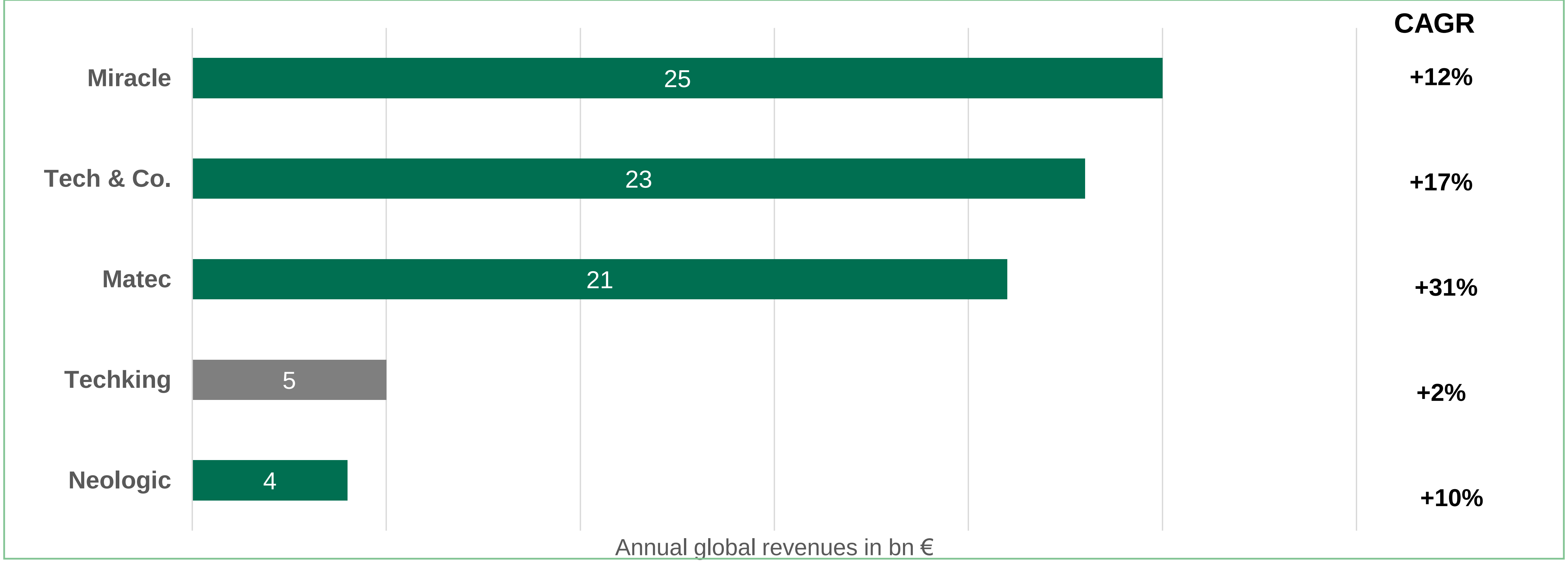
**A great candidate will cover these points:**

a) Analyzes multiple options, depending on risk appetite incl. clear pro's and con's and risks
b) Outlines that seemingly the previous M&A strategy of not doing any acquisitions might have set back the client significantly against the competition
c) Delineates rough implementation plan on how to get from as-is to target incl. estimated profitability of company

# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

**Exhibit 1 – Annual revenues and CAGR top 5 competitors (in bn €)**



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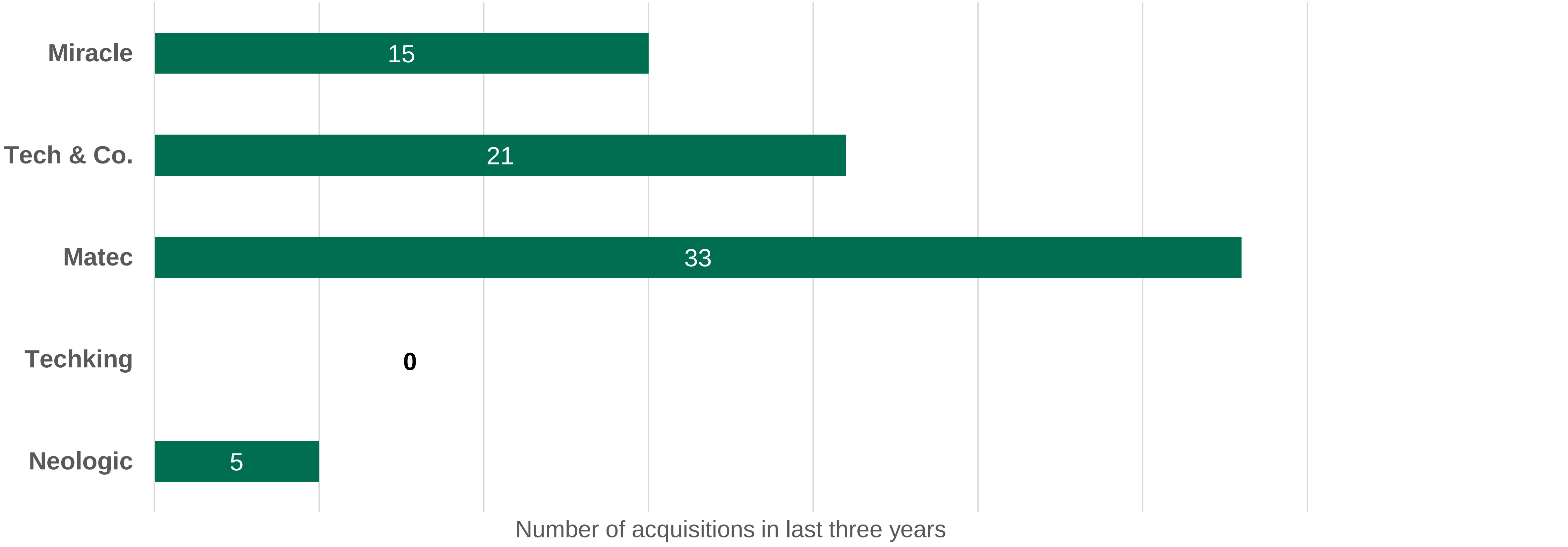
Author: Patrick Hammer ('21J)

**Exhibit 2 – M&A activities (acquisitions) in last three years**



# Save the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

## Exhibit 1 & 2 – Interviewer guide

| Company | Revenue (in bn €) | CAGR | M&A activities last three years |
|---|---|---|---|
| **Miracle** | 25 | 12% | 15 |
| **Tech & Co.** | 23 | 17% | 21 |
| **Matec** | 21 | 31% | 33 |
| **Techking** | 5 | 3% | 0 |
| **Neologic** | 4 | 10% | 5 |

**Additional guidance:**

**1) Size of client/ market fragmentation**

- Compared to top 3 the client is of comparably small size
- This could indicate competitive disadvantage in terms of economies of scale
- Rest of market is split by numerous smaller and larger players

**2) Revenue growth of client**

- Revenue growth is significantly lower than any competitor regardless of size

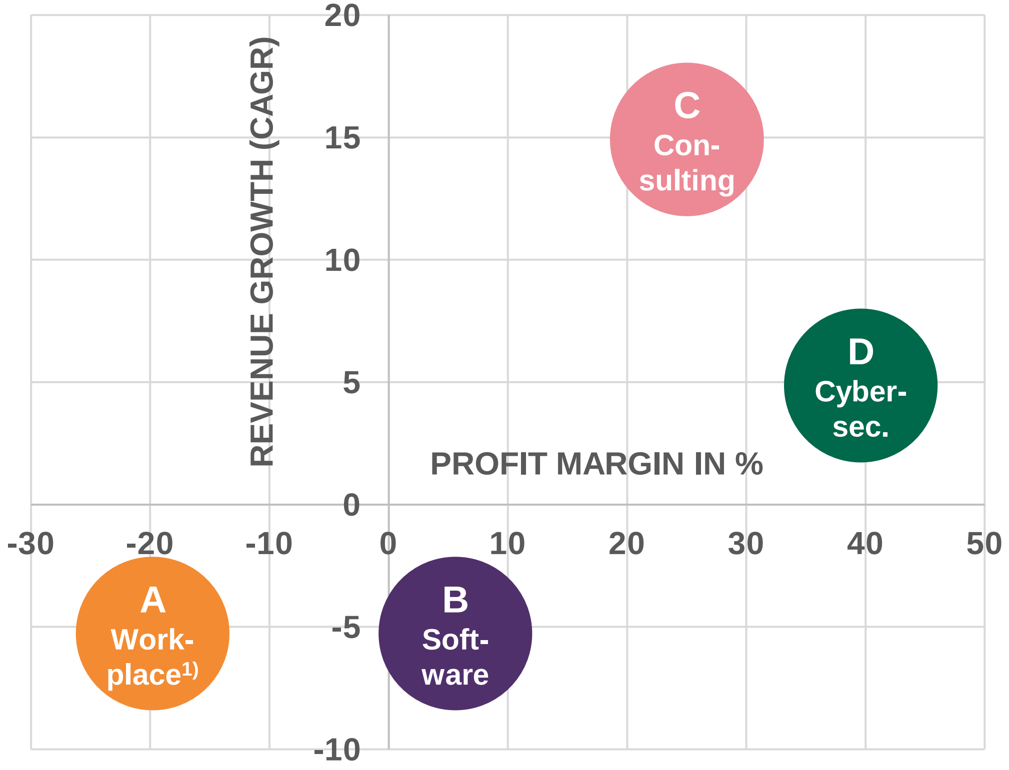
**3) M&A activities**

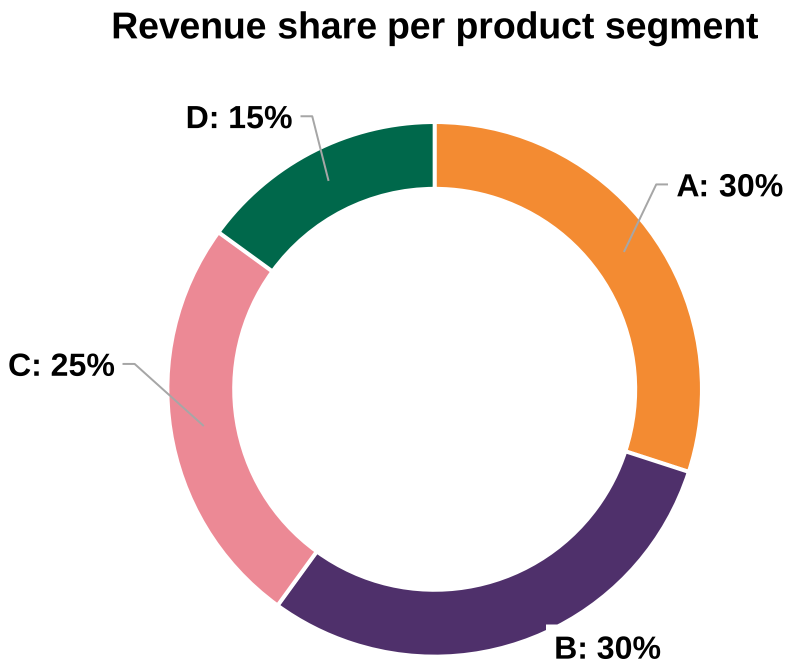
- Client performed no M&A activities in the last three years
- Candidate should identify that M&A activities seem to be linked with high revenue growth
- If candidate asks for reasons, state that missing M&A capabilities hold them back

# Save the the job of an INSEAD alumnus!

Author: Patrick Hammer ('21J)

**Exhibit 3 – Profitability, revenue growth and revenue per product segment**



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Author: Patrick Hammer (’21J)

## Exhibit 3 – Interviewer guide

| Product Segment | Revenue in bn € | Profit Margin in % | Profit in m€ |
|---|---|---|---|
| A | 1.5 (30%) | - 20% | - 300m€ |
| B | 1.5 (30%) | 5% | 75 m€ |
| C | 1.25 (25%) | 25% | ~ 300 m€ |
| D | 0.75 (15%) | 40% | 300 m€ |
| **TOTAL** | **5 bn €** | | **375 m€ / ~ 8%** |

**Additional guidance:**

- BCG 2x2 matrix can be well applied here
- Candidate expected to identify that product segment A underperforms significantly
- In case candidate asks why, explain that infavourable market conditions and price cuts due to strong competition were necessary
- Candidate should link information from left chart to revenue share to identify that largest segments are doing the worst
- Selling/ giving up segment A, client would be at 3.5 bn€ revenues while increasing profit by 300 m€
- New profit margin of revenues (375m€ + 300 m€) / 3.5 bn€) is ~ 20%, this is sufficient to keep CEO‘s job
- Other potential approach is to increase focus on high profit areas or divest product segment B as well

# Waterlogic

Author: Lan Ruixian ('21J), Winner of BCG Case Competition 2021 (3rd place)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 4 |
| **Difficulty level – Creativity** | 4 |
| **Difficulty level – Structure** | 2 |
| **Case led by** | Mixed |
| **Case type** | Profitability |
| **Industry** | Consumer Electronics |

  

# Waterlogic

Author: Lan Ruixian ('21J)

## Case Prompt

Our client is LAVA, a licensed distributor of Waterlogic water purifiers in Southeast Asia. They obtained exclusive rights to distribute water purifiers within the region 4 years ago.

While they enjoyed huge growth in the past 3 years when they first entered the market, sales have slowed, and they are now in a loss-making position. Management has called us in to diagnose the key issues as well as turn the business around. How would you advise them to proceed?

## Information to be used to answer clarifying questions

**Geography:** Thailand, Malaysia, Indonesia, and Vietnam
**Business model:** B2C, involves the local sales team travelling door to door to sell the products and services. Products come with 1 year warranty. We sell yearly service packages as well. The HQ team sits in Singapore and does everything out of a 10 pax office.
**Product:** Our products are top of the line in quality and are manufactured in US. We have not changed our product lineup in the past 4 years. Product life is about 5 years.
**Competitors:** LAVA's closest competitor is Cuckoo water purifiers. Their technology is less advanced than LAVA's, and they serve different markets.
**Goal:** To maximise profit, no generic time nor target amount

# Waterlogic

## Author: Lan Ruixian ('21J)

### Sample Framework

| | | | |
|---|---|---|---|
| **Profit** | **Decreased sales** | **Number of customers** | Market is being crowded out by competitors<br>Market is being saturated |
| | | **Spending per customer** | Customers are switching to cheaper models<br>Customers are not buying service packages from us |
| | **Increased costs** | **Fixed Costs** | HQ costs have risen |
| | | **Variable Costs** | Distributorship contract has become more restrictive<br>Sales team salaries have increased<br>Servicing costs have increased |

# Waterlogic

Author: Lan Ruixian ('21J)

## Guide to interviewer

Start off with a typical profitability framework
Allow candidate to produce an initial framework of diagnosing the profitability issue before giving any exhibits or data
Push the candidate to brainstorm issues **considering context**. Push for specific hypotheses as to why volume has fallen or average spending per customer has fallen, etc.
Candidate needs to know we sell both the product **AND** the servicing from the second year on

## Guide for use of exhibits

### Exhibit 1

Hand out if candidate asks for breakdown of profit

Key Insights:
a) Profit decrease from Thailand and Indonesia (key markets)
b) Growth potential in Malaysia and Vietnam

### Exhibit 2

Hand out exhibit if candidate asks for breakdown of Thailand and Indonesia (key markets)

Key Insights:
a) No changes in margin for 4 years
b) Not all that bought our products choose us as service agent

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# Waterlogic

Author: Lan Ruixian ('21J)

## Exhibit 1 – Profits across geographies


*LAVA only started operations in Malaysia and Vietnam in 2018, profits are not material

# Waterlogic

Author: Lan Ruixian ('21J)

## Exhibit 2 – Gross profits for Thailand and Indonesia

| | Thailand | | | | Indonesia | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2016 | 2017 | 2018 | 2019 |
| **Volume sold** | | | | | | | | |
| Water Purifiers | 20,000 | 18,000 | 15,000 | 12,000 | 12,000 | 10,000 | 8,000 | 7,000 |
| Service Package | - | 5,000 | 10,000 | 10,000 | - | 5,000 | 7,500 | 7,500 |
| | | | | | | | | |
| **Gross Margins* (USD 'mil)** | | | | | | | | |
| Water Purifiers | 20.0 | 18.0 | 15.0 | 12.0 | 12.0 | 10.0 | 8.0 | 7.0 |
| Service Package | - | 1.0 | 2.0 | 2.0 | - | 1.0 | 1.5 | 1.5 |
| | 20.0 | 19.0 | 17.0 | 14.0 | 12.0 | 11.0 | 9.5 | 8.5 |

*Gross profits are calculated net of COGS that is paid to Waterlogic
Total estimated market size for LAVA is 100,000 units for Thailand and 50,000 units for Indonesia

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# Waterlogic

Author: Lan Ruixian ('21J)

## Guide to interviewer

At this juncture the candidate should realise:

1. Market is becoming saturated as we have been in this market for 4 years already and we have not changed our product lineup for 4 years
2. Not all customers who buy water purifiers from us are buying service packages
3. Unit profit / contribution has stayed constant over the last 4 years

**Ask the candidate to brainstorm how to increase gross margins based on the data what we have so far. Push for more until they talk about B2B market. Then move on to an estimation of the margin uplift from the B2B expansion into Thailand**

## Increase number of customers

**Explore B2B market (KEY)**

Expand into new geographies

Educate on differences between our product and inferior Cuckoo to fend off competition

## Increase margin per customer

Introduce new products with higher margins

Educate on servicing importance

Identify servicing poachers

Negotiate better terms from distributorship

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# Waterlogic

Author: Lan Ruixian ('21J)

## Estimation

Our client is LAVA, a licensed distributor of Waterlogic water purifiers in Southeast Asia. They obtained exclusive rights to distribute water purifiers within the region 4 years ago.

While they enjoyed huge growth in the past 3 years when they first entered the market, sales have slowed, and they are now in a loss-making position. Management has called us in to diagnose the key issues as well as turn the business around. How would you advise them to proceed?

## Illustration - Estimation of margin uplift from expansion into B2B in Thailand

| | Small | Medium | Large |
|---|---|---|---|
| Number of businesses | 100,000 | 20,000 | 6,000 |
| Percentage who own offices | 50% | 80% | 100% |
| **Number of offices** | **50,000** | **16,000** | **6,000** |
| Number of units needed | 1 | 2 | 5 |
| Percentage captured in first year | 2% | 2% | 1% |
| **Number of units in first year** | **1,000** | **640** | **300** |
| Margin per unit | $1,000 | $1,000 | $1,000 |
| **Margin uplift** | **$1,000,000** | **$640,000** | **$300,000** |

# Waterlogic

Author: Lan Ruixian ('21J)

## Guide to interviewer

Above is for illustration only, but help the candidate see that:

1. We are interested in helping LAVA break even next year and hence, only water purifier sales should be considered and not servicing
2. Different sized companies have different likelihood of having a corporate office (B2B)
3. Different sized companies need different number of units
4. We can capture different percentages of different markets
5. Margin per sale of $1,000 is derived from Exhibit 2

**Push the interviewee to explore all issues, not just revenue, but cost cutting measures as well. Nudge the interviewee to ask for cost breakdown.**

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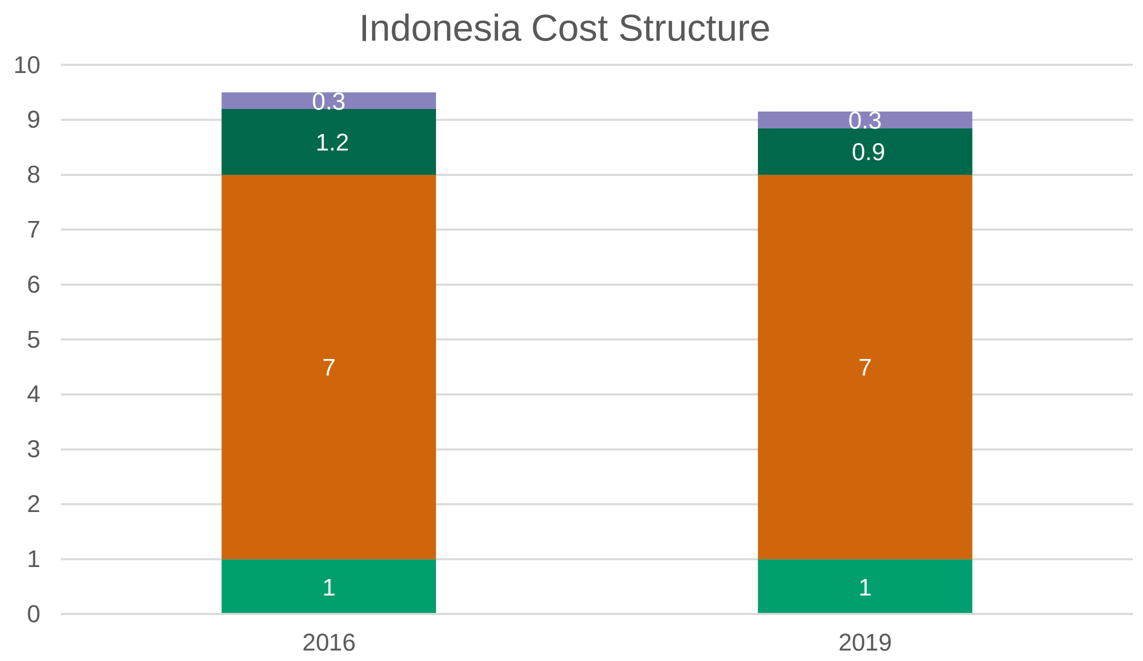
# Waterlogic

Author: Lan Ruixian ('21J)

## Exhibit 3 – Thailand and Indonesia Cost Structure


10% of gross margins are paid as sales team commissions

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# Waterlogic

## Author: Lan Ruixian ('21J)

### Guide to interviewer

Key insights are as follows:

1. Company is very fixed cost heavy
2. Even though sales has dropped by close to **30%** for both Thailand and Indonesia, total Sales team compensation has only dropped about **5%**
3. Sales team is very unmotivated to work as variable portion takes up a very small percentage of their compensation
4. Rest of the costs are relatively stable

**Nudge the interviewee to arrive at the recommendation to variabalise sales costs and tying the sales team compensation closer to the performance of the company. Also nudge for the risks surrounding fully variabalising the sales costs – impact to the team etc**

# Waterlogic

## Author: Lan Ruixian ('21J)

### Sample Solution & Recommendations

Profits have fallen because:

1. Sales have stagnated due to market saturation
2. Customers are not purchasing service packages
3. Sales compensation has not changed much despite the decrease in sales (Sales team compensation is not motivated to sell due to large fixed compensation)

To turn around the company, we will need to pull both sales and cost levers. We can consider:

1. Expanding into B2B ($1.94 mil GM increase for Thailand) or other countries
2. Increase spending per customer via better products
3. Variabilise sales team comp and tie their salary to the fate of the company

**Risks:**

Communication to sales team new scheme and managing their expectations

**Next steps:**

Investigate why consumers are not buying servicing packages from us
Quantify sales uplift and margins for Indonesia as well
Replicate business model in Malaysia and Vietnam

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# Waterlogic

## Author: Lan Ruixian ('21J)

### Guide: Good vs Great Case

A good candidate will cover these points:

a) This is a combination cost and revenue problem and not lose track of either

b) Realise that the markets LAVA is in are saturated and there's not much we can do

c) Think of ways to expand revenues via B2B or via the other geographies

d) Consider reducing the compensation of the sales team in general

A great candidate will cover these points:

a) Quantify and keep track of the possible uplift along the way and incorporate that data point in the final recommendation

b) Go beyond the obvious and realise that subsequent demand for service packages is lower than **cumulative** water purifiers sold. There is a serious problem with this.

c) Realise a large portion of sales compensation is fixed and it should not be the case, suggest to variabilise compensation.

# Great Western Bank

Author: Matthew Michaelides ('21J)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 5 |
| **Difficulty level – Creativity** | 4 |
| **Difficulty level – Structure** | 2 |
| **Case led by** | Interviewer-led |
| **Case type** | Profitability / Cost-Cutting |
| **Industry** | Financial Services |

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# Great Western Bank

Author: Matthew Michaelides ('21J)

## Case Prompt

Our client is a small retail bank in the United States called Great Western Bank (GWB). GWB has 50 branches across the Western United States. In the past two years, the company has experienced a decline in profitability, and their CEO has sought our help to identify the root cause for the decline and see if we can help GWB address the problem. How would you advise the CEO?

## Information to be used to answer clarifying questions

- *As a retail bank, GWB provides checking and savings accounts to members of the public, rather than companies. It then uses these deposits to make loans, also to individuals.*
- *GWB generates revenue by making three types of loans: mortgages, auto loans, and personal loans. The bank's assets are evenly allocated across these types of loans and its Central Bank reserves (i.e. 25% in each of the four categories).*
- *Profitability has fallen by $34M over the last two years.*
- *GWB has approximately 300,000 customers and $4.4B in interest-bearing deposits*

## Guide to interviewer

*This case tests profitability (revenue and costs), brainstorming, and both qualitative and quantitative analysis*

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Sample Framework

**Profitability**

- **Revenue**
- **Costs**
  - Variable costs: interest on deposits, labor, office supplies, …
  - Fixed costs: rent, depreciation, technology costs, electricity and utilities, marketing expenses, …

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# Great Western Bank

Author: Matthew Michaelides ('21J)

## Question 1

- *The client has given us the following information about its revenues (Exhibit 1). Based on the data, calculate GWB's revenue in 2018 and 2020. What can be said about GWB's business positioning?*

## Guide to interviewer

A good candidate will cover these points:

a) Volume is increasing slowly but steadily while market share is constant, indicating the market overall is experiencing slow growth
b) Interest rates across the board have fallen by 20% over two years
c) Revenue is $176M, down from roughly $200M, which is greater than a 10 percent decline.

Clarification Points

- $4.4B refers to deposits at GWB, not the whole market
- GWB earns interest on reserves at the rate specified in Exhibit 1

A great candidate will cover these points:

a) Decreasing interest rates hasn't led to an increasing market share in the lending market, suggesting the lending market is getting more competitive on pricing (interest rates).
b) The revenue figures can be calculated by averaging the interest rates and multiplying by the total amount of deposits, rather than computing each product's revenue separately.

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Question 2

- *What actions could the client consider to boost revenues in view of your analysis?*

## Guide to interviewer

Possible responses could include:

a) Core Business Optimization
   i. Marketing strategy
      - Partnerships with local businesses to give discounts to our customers
      - Advertising via TV, radio, etc..
      - Online advertising
      - Customer research to learn more about different customer segments and better target products
   ii. Customer research to see if there are opportunities to steal customers by adding new services/amenities
   iii. Improve use of data when making loans to reduce NPLs
   iv. Reallocate reserves to higher-yielding assets such as auto loans
b) New Products – expanding into riskier loans that command higher rates, selling insurance
c) New Markets – opening new branches, expanding to new geographies, offering corporate banking
d) M&A to reduce competition in the industry and increase interest rates

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Question 3

- *As the client contemplates some of your suggestions, they have decided that in the short-term they will need to cut costs to improve profitability. (See Exhibit 2.) Calculate the company's total costs.*
  *(After the candidate has reviewed the cost data) The client is considering eliminating their notary services, currently offered at all their locations. How would you go about evaluating this option?*

## Guide to interviewer

A good candidate will cover these points when reviewing the cost data:

a) Interest is considered an expense, because it is the money you have to pay your clients (depositors)
b) The typical branch has costs of $1.26M plus interest costs ($2M, if you assume each of the branches has the same amount of deposits).
c) Total costs are $173M, up from $163M.
d) Profits are currently about $3M, based on our prior computation of $176M in revenue. This is down from $37M.

Clarification Points:

- Notaries are professionals that retail banks in the U.S. typically keep on staff to witness signatures for legal documents, including those related to property and financial asset transfers. These services are typically rendered free of charge to bank customers.
- All costs in Exhibit 2 are annualized. Interest on deposits is charged for deposits held at that particular branch.

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Question 3 (continued)

- *As the client contemplates some of your suggestions, they have decided that in the short-term they will need to cut costs to improve profitability. (See Exhibit 2.) Calculate the company's total costs.*
  *(After the candidate has reviewed the cost data) The client is considering eliminating their notary services, currently offered at all their locations. How would you go about evaluating this option?*

## Guide to interviewer

A good response should include (a) and a great response will include all or some of (b)

a) Profitability
   a) Cost savings of $150,000 per branch per year, or $7.5 million.
   b) Possible losses from eliminating the notary service. These include:
      - Opportunities to market our existing products to existing customers when they visit for notary services
      - Attracting new customers who require notary services
      - Increasing customer loyalty to our branch, as they grow reliant on our notary service
      - Opportunities to build a more personalized customer service for our clients

b) Qualitative Factors: competitive response (do our competitors also offer notary services? Are there new entrants offering notary services in a more convenient way?), trends in customer demand (do people use notaries as often as they once did?, …

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Question 4

- *Based on our suggestion, the client has conducted some market research to better evaluate the option to cut its notary service offering (Exhibit 3). How do the results impact your view of this cost-cutting opportunity?*

## Notes to Interviewer

A good candidate will cover these points:

a) Most customers use the notary service very infrequently.
b) The customers who do use the notary service frequently tend to be customers with more assets on deposit with GWB.
c) Cutting notary services would result in net losses. For example, if we lost all the customers who use the notary frequently (twice per quarter or more), we would lose about $720M in interest-bearing deposits, incurring losses of roughly $30M, based on the ~4% average interest rate calculated earlier in the case. This alone far exceeds the $7.5M we would save from cutting the notary services.

A great candidate will cover these points:

a) We could consider laying off our notaries and training our bank tellers and loan officers to double as public notaries to cut costs while maintaining the notary service offering.
b) The data provided does not consider the possibility for changes in customer preferences regarding notaries going forward

# Great Western Bank

Author: Matthew Michaelides ('21J)

## Sample Solution & Recommendations

GWB's $34M fall in profitability has been primarily caused by a fall in revenues and specifically a fall in the interest rates it is charging. Although there has been a modest increase in GWB's interest-bearing deposits, GWB is earning 20% less in interest on its deposits, which appears to be due to falling interest rates across the industry.

While it may be tempting to cut ancillary client services like notary services, our market research indicates that cutting these services could lead to at least a 20% drop in our interest-bearing deposits and revenue due to the large volume of deposits held by customers using notary services.

As a next step, we could consider other cost-cutting measures such as retraining our bank tellers and loan officers to handle notary services, enabling us to realize the potential $7.5M cost savings from laying off our notaries without losing customers. We should also consider long-term solutions to boost revenue such as M&A, which would improve our bargaining power with customers, or opening additional bank branches.

  

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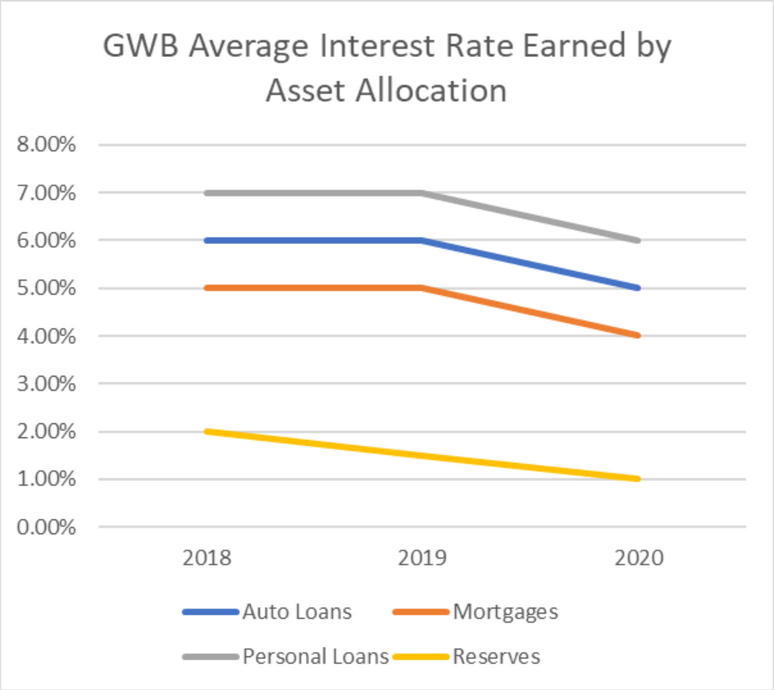
# Great Western Bank

Author: Matthew Michaelides ('21J)

## Exhibit 1 – GWB Interest-Bearing Deposits and Loan Portfolio

| Date | Deposits ($MM) | Deposits - Market Share (%) | Loans - Market Share (%) |
|---|---|---|---|
| 2018 | 4000 | 15.3 | 15.1 |
| 2019 | 4200 | 15.5 | 15.4 |
| 2020 | 4400 | 15.4 | 15.2 |




*Note: Loan defaults are incorporated into interest rates earned*

# Great Western Bank

Author: Matthew Michaelides ('21J)

**Exhibit 2 – Cost Structure of Average GWB Branch**

| | |
|---|---|
| Interest on Deposits | 2.5% of deposits |
| Labor Costs | |
| Loan Officers | Six, each making $60,000 per year |
| Tellers | Four, each making $50,000 per year |
| Notaries | Three, each making $50,000 per year |
| Technology & Equipment | $200,000 |
| Other Fixed Costs | $350,000 |

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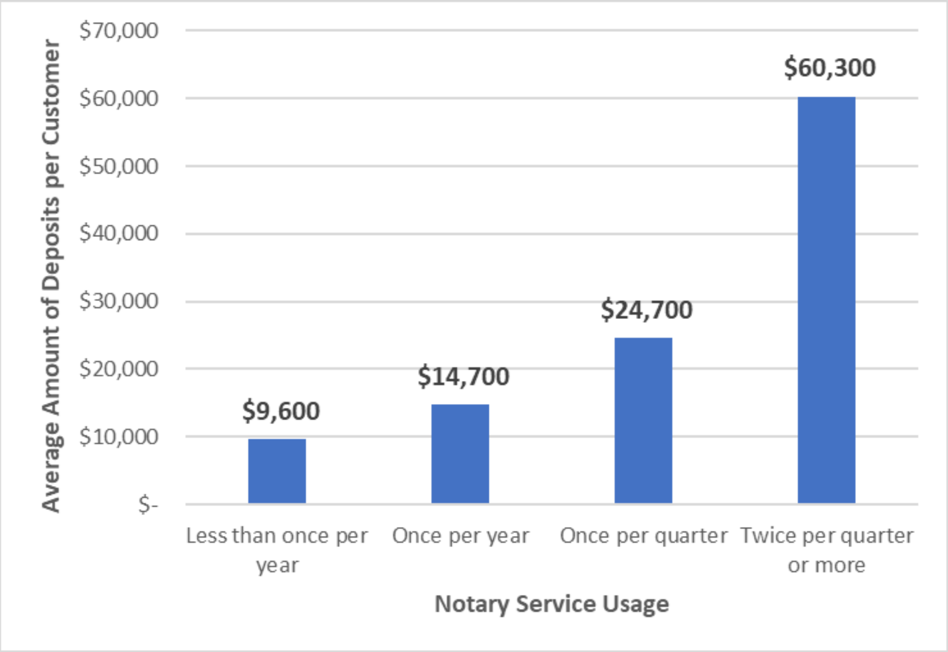
# Great Western Bank

Author: Matthew Michaelides ('21J)

## Exhibit 3 – Customer Analysis by Usage of Notary Services

| Customer Type | % Customers |
|---|---|
| Less than once per year | 78% |
| Once per year | 10% |
| Once per quarter | 8% |
| Twice per quarter or more | 4% |



# GoodWind Technologies

Author: Federico Lugnani ('20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 5 |
| **Difficulty level – Creativity** | 3 |
| **Difficulty level – Structure** | 4 |
| **Case led by** | Mixed |
| **Case type** | Market sizing, Competitive advantage |
| **Industry** | Industrial goods, textile machinery |

# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Case Prompt

*GoodWind is a textile machinery manufacturer specialized in the production of winding machines, the machine used at the end of the cotton yarn production process. The winding machine has been used for the past 50 years, but now two new technologies – open-end spinning and air-jet spinning – are threatening its existence. Our client has three main questions he wants you to address:*

1. *What is the current market size of the global winding machines market?*
2. *What is GoodWind's current market share and profit?*
3. *Should GoodWind worry about these new and potentially disruptive technologies?*

## Information to be used to answer clarifying questions

*A winding machine is used to refine yarn quality, sourcing yarn from different ring spindles to produce a homogeneous and higher quality yarn*

*Open-end spinning and Air-jet spinning already produce a final product, there is no need for further yarn refinements*

*GoodWind has no other business unit and is not developing any other machine at the moment*

# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Guide to interviewer

- *Topics being tested: Market size, Profitability (tested very lightly), Qualitative analysis and creativity*
- *Explain any doubt the candidate might have about Exhibit 1*
- *Expect the candidate to ask information about current sales volume, price, costs (fixed and variable)*

## Guide for use of exhibits

**Exhibit 1**

Hand out this exhibit at the start of the case, but after the candidate asks for some data concerning cotton

**Key insight:**
To estimate sales volume it is needed to convert total yarn production from weight to length

**Exhibit 3**

Hand out this exhibit when the candidate has to answer question 3 (potential disruption)

**Key Insights:**
a) Winding machines market seems still ok
b) There are other things to consider for a proper assessment

# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Sample Framework – Q1: Market sizing (data from Exhibit 1)

*Cotton yarn produced via ring spindles = 40M tons * 75% = 30M tons*

*Since winding speed is in [m/min], it is necessary to convert weights into lengths using Ne.*

*Ne = 40 means that to get 0.5 kg of yarn (1 pound) we need 40 * 840 meters (1m = 1 yard). Therefore, 1 kg of yarn = 40 * 840 * 2 = 67,200 m ~ 67,000 m = 67 km*
► ***Shortcut: tell the candidate 1kg of yarn is 67km long***

*With 1 kg of yarn long 67 km, 30M tons of yarn = 30M * 1,000 * 67 km ~ 2,000bn km*

*To estimate total number of machines installed, it is necessary to use the average winding speed of 1,200 m/min. In 1 year, a machine processes about*
*1.2 km/min * 60 min/h * 24 h/day * 350 days/year * 80% efficiency = 483,840 km ~ 500k km*
► ***Shortcut: tell the candidate 1 machine can process 500k km of yarn per year***

*Total capacity installed = Total length processed / Length processed per machine*
*Total capacity installed = 2,000bn km / 500k km = 4M*

*From the capacity installed and the expected life (20 years) it is possible to calculate the expected sales per year, assuming a 1/20 = 5% renewal rate.*

***New sales** = Total capacity installed * Renewal rate = 4M * 5% = **200,000 units (MARKET SIZE)***

# GoodWind Technologies

Author: Federico Lugnani (‘20D)

## Sample Framework – Q2: Market share and profit

**Data to provide upon request from the candidate (eventually show Exhibit 2)**

| | |
|---|---|
| GoodWind winding machines 2019 sales [units] | 80,000 |
| Price per winding machine [€] | 2,500 |
| Cost per winding machine [€] | 2,000 |
| Fixed costs [€] | 30,000,000 |

*Market share = GoodWind sales / Market sales (from previous calculations)*
***Market share*** *= 80,000 / 200,000 =* ***40%***

*Profit = (Price per machine – Variable cost per machine) * Machines sold – Fixed costs*
*Profit = (2,500 – 2,000) * 80,000 – 30,000,000*
***Profit*** *= 40,000,000 – 30,000,000 =* ***10,000,000***

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# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Sample Framework – Q3: Market disruption

*Rough calculations from Exhibit 3*

- ***Winding machine**: to get 1,200 m/min it is necessary to pay 2,500 € / 80% = 3,125 €*
- ***Open-end spinning**: to get 2,500 m/min it is necessary to pay 5,000 € / 50% = 10,000 €, so to get ~ 1,200 m/min the price is about 5,000 €*
- ***Air-jet spinning**: to get 5,000 m/min it is necessary to pay 15,000 € / 75% = 20,000 €, so to get ~ 1,200 m/min the price is about 5,000 €*

*From these calculations, it seems that winding seems to be the cheapest way to produce yarn, and therefore it seems potentially not disrupted by the new technologies.*

*Additional considerations to be taken into account (that the candidate could mention for additional credit):*

- *Exhibit 3 is **ignoring the price and efficiency of ring-spindles**, which ideally should enter the calculation, and could potentially revert the conclusion*
- *Exhibit 3 is also **ignoring the operating costs** of such machines (e.g. Air-jet has 4x the output of a winding machine, therefore could potentially save on energy consumption, maintenance, room required)*
- ***IF Open-end spinning or Air-jet spinning can improve** speed or efficiency or can become cheaper in the future, there is a **potential threat** for GoodWind's market*
- ***Yarn quality is also not considered**: Open-end spinning and Air-jet spinning DO NOT produce high quality yarn, therefore there are certain applications which still require Ring spinning and Winding machines*

# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Sample Solution & Recommendations

- *Q1: Market size = 200,000 units in 2019*
- *Q2: GoodWind market share = 40%, Profit = 10M€*
- *Q3: Potential disruption: the market seems still ok, there are other factors to consider such as complementary equipment (ring spindles), operating costs, potential improvements, product quality, which might potentially alter the market perception*

## Guide: Good vs Great Case

A good candidate will cover these points:

a) Make it through Q1 with a bit of guidance
b) Answer Q2 promptly identifying what data are needed
c) Identify the winding heads market as still ok for GoodWind

A great candidate will also cover these points:

a) Make it through Q1 mainly on his own
b) Answer Q2 promptly identifying what data are needed
c) Confirm the market is still good, but reflecting on potential other factors in the near future / in the model considered

# GoodWind Technologies

Author: Federico Lugnani (‘20D)

For this case:
1 yard = 1 meter
1 pound = 0.5 kg

## Exhibit 1 – Market data

| | |
|---|---|
| **Cotton yarn produced globally in 2019 [million tons]** | **40** |
| *Via Ring spindles* | *75%* |
| *Via Open-end spindles* | *20%* |
| *Via Air-jet spindles* | *5%* |
| **Average Number English (Ne)[1]** | **40** |
| **Average winding machine speed [m/min]** | **1,200** |
| **Winding efficiency** | **80%** |
| **Expected winding machine life [years]** | **20** |

*1. Ne is defined as the number of hanks (1 hank is a section of yarn 840 yards long) which weigh 1 pound (0.454 kg). The finer the yarn, the higher the number of hanks to give the same weight. E.g. Ne = 2 means that a section of 840 * 2 = 1680 yards weigh exactly 1 pound*

# GoodWind Technologies

Author: Federico Lugnani ('20D)

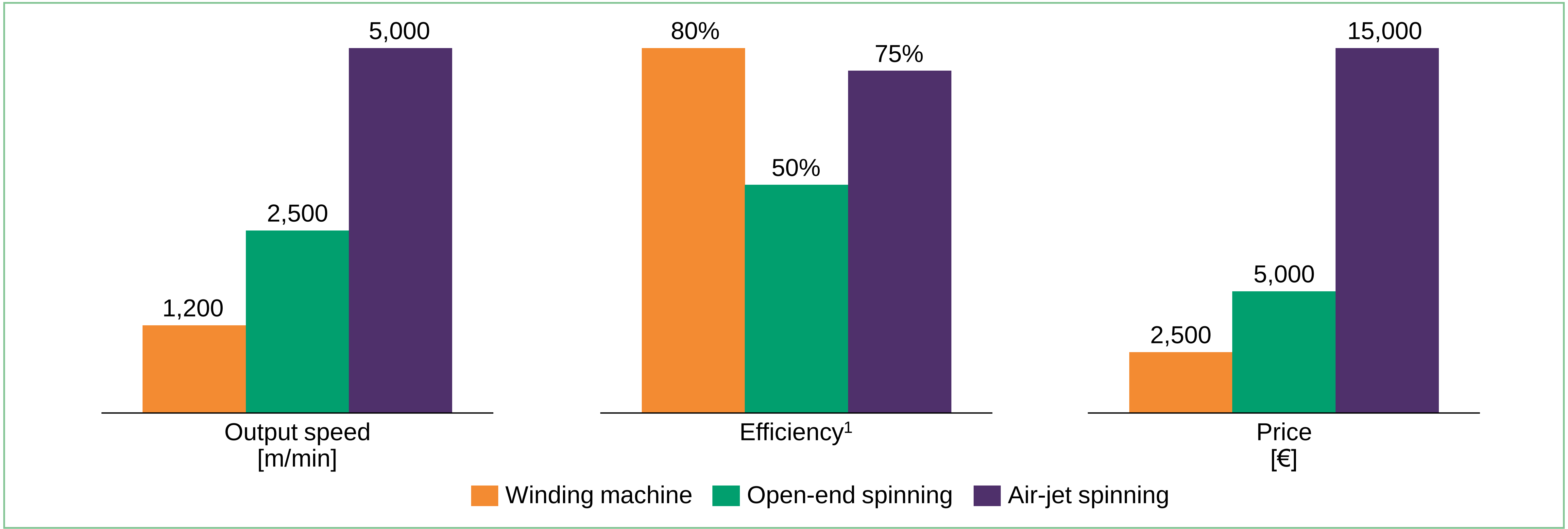
## Exhibit 2 – Company data

| | |
|---|---|
| **GoodWind winding machines 2019 sales [units]** | **80,000** |
| **Price per winding machine [€]** | **2,500** |
| **Cost per winding machine [€]** | **2,000** |
| **Fixed costs [€]** | **30,000,000** |

# GoodWind Technologies

Author: Federico Lugnani ('20D)

## Exhibit 3 – Spinning technologies




*1. Efficiency is defined as the final product accepted / total product processed. E.g. an efficiency of 60%, means that a potential output of 1,000 m/min is reduced to 600 m/min of acceptable final product*

# Innovation in Chemical Products

Author: BASF Management Consulting

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 2 |
| **Difficulty level – Creativity** | 4 |
| **Difficulty level – Structure** | 5 |
| **Case led by** | Interviewer |
| **Case type** | Market Innovation & Growth |
| **Industry** | Chemicals |

**Connect with us:** Website

# Innovation in Chemical Products

Author: BASF Management Consulting

## Case briefing

BASF Management Consulting was approached by the Head of one of BASF's businesses (the Client). The Client shared with us the following information:

Historically all of their markets grew strongly – with BASF as innovation leader in top market position.

Since then, the markets have developed very differently. Some are growing, others shrinking in volume, some are commoditizing due to strong me-too competition from Asia. Sales approach is mostly global key account management.

To drive growth in this situation, the Leadership team decided to differentiate / innovate on business models.

Two business models that have been initially discussed as possibilities are:

- Commodities
- Specialties

**Guide to the Interviewer:** Clarifying questions (on prompt)

**Geographic Scope:** Global

**Products in focus here** – more details see Interviewee material 2/3: Products in focus:

- Precursor to Detergents Additives (PDA)
- Fiber Polymers

**Customers:** No change expected in customer needs

**Deliverables:** Provide transparency and strategic options for the following questions …

1. How we can grow with the products in focus – by applying the right business model of …
   - Commodities (i.e. cost focus) OR
   - Specialties (innovation and service focus)
2. How can the new business models look like in terms of…
   - Product Portfolio & Innovation
   - Customer Segments & Channels
   - Pricing & Discounts

# Innovation in Chemical Products

## Author: BASF Management Consulting

**Interviewee material 1/3: Typical features of Commodity vs. Specialty business models**

| | Commodity | Specialty |
|---|---|---|
| **Pricing** | Competitive pricing | Value pricing |
| **Product** | Standardized | Jointly developed with customer |
| **Promotion** | Low promotion efforts | Active promotion required |
| **Distribution** | Direct sales to large customers<br>Distributors / e-Commerce for others | Direct sales<br>*(predominantly key account business)* |
| **Innovation investment** | Low | High<br>*(Joint development)* |
| **Supply chain** | Lean and reliable | Flexible to customer needs<br>*(e.g. individual packaging)* |

*Notes to Interviewer: Please handover the Interviewee Material after the Case briefing*

# Innovation in Chemical Products

## Author: BASF Management Consulting

**Interviewee material 2/3: Products in focus**

### Precursor to Detergents Additives (PDA)

- Precursor for addictives to the detergent products
- Predominantly Key Account business
- End consumers have diverse requirements, leading to the need of our customers to differentiate their products

**To be marketed as…**

### Fiber Polymers

- A long-chain polymer synthetic fiber available from a several suppliers with comparable features
- Has a myriad of applications
- Used widely in the packaging, plastic processing, construction, furnishing sector, automotive and textile industry

*Notes to Interviewer: Please handover the Interviewee Material after the Case briefing*

# Innovation in Chemical Products

Author: BASF Management Consulting

## Interviewee material 3/3: Case solution template

| | Business Model | Product & Innovation | Sales |
|---|---|---|---|
| **PDA** | | | |
| **Fiber Polymers** | | | |

*Notes to Interviewer: Please handover the Interviewee Material after the Case briefing*

# Innovation in Chemical Products

Author: BASF Management Consulting

**Question 1: Where do you see the key differences between the Commodity vs. Specialty business model?**

| Commodity *Cost Focus* | Business Model | Specialty *Innovation & Service Focus* |
|---|---|---|
| Low R&D costs / product platform<br>Few big products / long life cycle | Product Portfolio & Innovation | Portfolio extension<br>Continuous product development |
| Low selling costs / low service level<br>Distributors / sales partnerships | Customer Segments & Channels | Salesforce effectiveness / high service<br>New channels / customers / projects |
| Competitive pricing (Supply / demand driven)<br>Market share / volume driven pricing | Pricing & Discounts | Value pricing / branding<br>Potential price increase with innovation |

**Guide to the Interviewer:** Hand over Interviewee Material 1 & 2 to interviewee and discuss

# Innovation in Chemical Products

Author: BASF Management Consulting

**Question 2: What could be typical (internal & external) trigger points to differentiate between Commodity & Specialty business models?**

**A good answer would consider both internal & external trigger points - and raise the following key points:**

What could be typical market conditions?

| Commodity | Specialty |
|---|---|
| ▪ Intense competition<br>▪ Overcapacities in production / long market<br>▪ Price pressure<br>▪ Me-too products – technical differentiation difficult<br>▪ Few innovation in products<br>▪ Price-sensitive customers<br>▪ Direct sales to large customers and Distributors / e-Commerce for others | ▪ Moderate competition<br>▪ Limited capacities in production / short market<br>▪ Elevated price level reflecting customer value added<br>▪ Unique product features / patented technologies<br>▪ High innovation / short product life cycles<br>▪ Value-sensitive customers<br>▪ Direct sales / medium to high selling costs |

What could be typical conditions inside your company?

| Commodity | Specialty |
|---|---|
| ▪ High importance of manufacturing costs<br>▪ High volume business<br>▪ Customers rather not interested in innovation<br>▪ Customer focus on lean & reliable supply at low costs | ▪ Low cost of sales compared to gross margins<br>▪ Relatively low volume business<br>▪ Customer highly interested in innovation – even willing to join in the R&D process<br>▪ High R&D spending for wide range of applications |

**An excellent answer would consider all points in a structural manner plus own ideas / speculations**

**Guide to the Interviewer:** Discuss based on case introduction

# Innovation in Chemical Products

## Author: BASF Management Consulting

**Question 3: Which business model you would recommend for PDA and Fiber Polymers product?**
**What are your concrete recommendations for each go-to-market approach to apply the new business models?**

**A good answer would resemble the key points in the following table:**

| | Model | Product & Innovation | Sales |
|---|---|---|---|
| **PDA** (Specialty) | ▪ Defend innovation leader position by differentiating between global key accounts & other customer accounts | ▪ Continue investing in R&D with key accounts to drive product innovation based on end consumer's needs<br>▪ Standard offerings for other accounts | ▪ Utilize the value of our products for our market approach e.g. If customer can charge higher prices for their final products, we can get a fair share of this premium to reflect the value provided by our own products<br>▪ Offer excellent customer service, direct sales and flexible packaging |
| **Fiber Polymers** (Commodity) | ▪ Further adjust (global) operating model towards commodity / standardized approach | ▪ Very limited innovation & R&D<br>▪ Depending on different Fiber Polymer products, can offer different packaging types<br>▪ Reconsider investment into developing new applications | ▪ Existing selling setup very lean, limited benefits expected by using distributors<br>▪ Further drive supply chain optimization with lean & cost-efficient setup |

**An excellent answer would consider all points in a structural manner – see slide "step-by-step instruction (2/2)" plus own ideas / speculations**

**Guide to the Interviewer:** First, handover to interviewee Exhibit 1 & 2, discuss key takeaways for each exhibit, then ask the interviewee to complete solution template in Interviewee Material 3. Finally, discuss the solution.

# Innovation in Chemical Products

Author: BASF Management Consulting

**Question 4: What could go wrong? What would be the typical challenges / risks in different business models?**

**A good answer would resemble the key points in the following table:**

| Fiber Polymers | PDA |
|---|---|
| ▪ Get supply chain lean and reliable<br>▪ Increasing cost pressure (e.g. oil price going up)<br>▪ Buy in of salespeople to the new lean and reliable approach (i.e. no more selling “the best product”, but the “best price”)<br>▪ Cooperation with distributors (e.g. are our products well promoted in their portfolio?)<br>▪ Risk of market squeeze out (e.g. when product costs exceed market price) | ▪ Commoditization of the market<br>▪ Effectively communicating customer about the value of our product, e.g. our innovations serve end consumer’s needs<br>▪ New competitor market entry / increasing competition<br>▪ Overspending in R&D / Allocation of joint-R&D efforts (Which innovation really makes sense? / how much does it cost? What should be the collaboration mode with customers? Cost sharing model?) |

**An excellent answer would consider all points in a structural manner plus own ideas / speculations**

**Guide to the Interviewer:** Discuss based on the interviewee’s solution on Question 3

# Innovation in Chemical Products

## Author: BASF Management Consulting

### Question 5: What would be the core messages to your salespeople to get their buy-in?

**A good answer would resemble the key points in the following table:**

| Fiber Polymers | PDA |
|---|---|
| ▪ Use 20% of your time on Fiber Polymers<br>▪ Focus on low cost and reliability as selling points<br>▪ Focus on high volume sales and long-term contracts<br>▪ Standardization of products reduces complexity<br>▪ Cooperation with supply chain colleagues is key<br>▪ Spend more time for Specialties | ▪ Use 80% of your time for PDA<br>▪ Great customer service is key differentiator<br>▪ More customer focus + understanding end consumers<br>▪ More spending for R&D<br>▪ Customer value and Customer service are keys<br>▪ Partnership with our customers (e.g. joint product development) |

**Guide to the Interviewer:** Discuss based on the interviewee's solution on Question 3 – imagine to give a presentation to 200 salespeople, assuming every sales person sells BOTH Fiber Polymers & PDA.

### Question 6: What would be core messages to customer, if product now is sold as Commodity, before as Specialty?

**A good answer would consider 3 following key points:**

- Lean and reliable
- Good prices
- Standardization of products reduces complexity

**Guide to the Interviewer:** Discuss based on the interviewee's solution on Question 3

**Excellent answers to Question 5 and 6 would add in reasoning for each points and own ideas / speculations.**

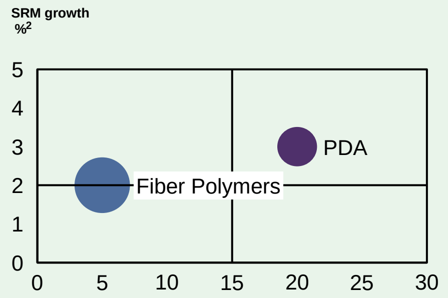
  

# Innovation in Chemical Products

Author: BASF Management Consulting

## Case solving: step-by-step instruction 1/2

### High Level Strategy Review




- Market attractiveness (SRM growth)
- BASF competitive position (CM)

| Product | Net Sales (€m) | CM2 (€m) | Selling Cost (€m) | R&D (€m) | Customer Analysis (GM based) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | GM (€m) | A (up to 80%) | B (80-95%) | C (bottom 5%) | Notes |
| Fiber Polymers | 142.1 | 7.1 | 0.5 | 1.2 | 12.0 | 20 | 16 | 21 + others | Others: 44% of GM |
| PDA | 72.9 | 14.6 | 3.7 | 4.5 | 35.5 | 10 | 13 | 6 + others | Others: 10% of GM |

- R&D Intensiveness
- Selling/ Cost-to-Serve
- Key Customer Segments

### Checkpoints for Innovative Business Models

**1** **Overall Direction & Business Model**

How should the market be served by **Fiber Polymers** or **PDA**?

Are there **areas to defocus**?

**2** **Product Portfolio & Innovation**

What are the implications on our Innovation setup, e.g. **Product Portfolio, Innovation and Price Point**?

**3** **Customer Segments & Channels**

What are implications on our go-to market approach, e.g. **Customer Segments & Channels**?

*Notes to Interviewer: This is an optional material – to use as recap after the case interview if necessary, as FYI for how we approached the project at BASF Management Consulting*

# Innovation in Chemical Products

Author: BASF Management Consulting

## Case solving: step-by-step instruction 2/2

### 1 Overall Direction & Business Model

- Commodity Model
- Specialty Model
- Focus vs Defocus
- …

### 2 Product Portfolio & Innovation

**Product Portfolio**

- Eliminate / Push product groups
- Standardized products
- Develop product platforms
- Price points
- ...

**Innovation**

- New products / Line extensions
- New joint development projects
- Sustainability
- Innovative services
- …

### 3 Customer Segments & Channels

**Customer Segments**

- New target groups
- New packing
- Business rules
- …

**Channels**

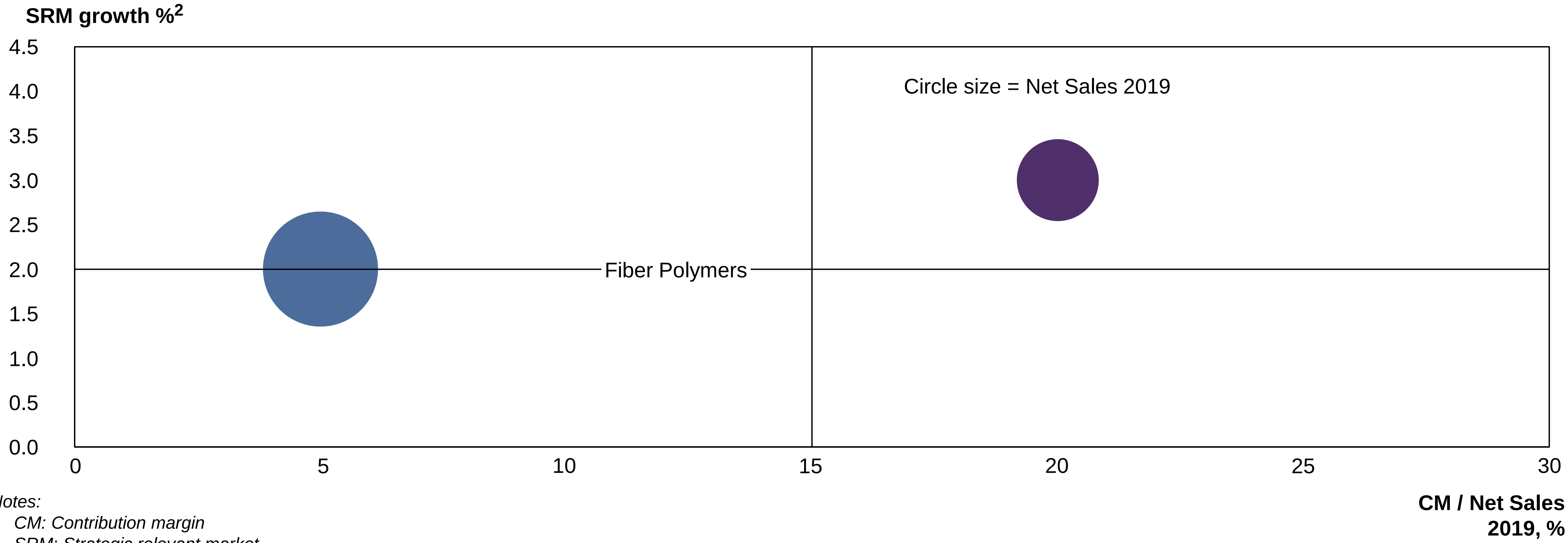
- E-commerce
- Distributors
- Speed of delivery
- …

*Notes to Interviewer: This is an optional material – to use as recap after the case interview if necessary, as FYI for how we approached the project at BASF Management Consulting*

# Innovation in Chemical Products

Author: BASF Management Consulting

**Exhibit 1/2: Products CM / Net sales 2019 & SRM Growth (%)**




*Notes:*

- *CM: Contribution margin*
- *SRM: Strategic relevant market*
- *To Interviewer: hand over Exhibit materials to Interviewee at Question 3*

# Innovation in Chemical Products

## Author: BASF Management Consulting

**Exhibit 2/2: Overview of CM, Selling Cost & R&D including customer ABC analysis**

| Product | Net Sales (€m) | CM (€m) | Selling Cost (€m) | R&D (€m) | Customer Analysis (GM based) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | GM (€m) | A (up to 80%) | B (80- 95%) | C (bottom 5%) | Notes |
| Fiber Polymers | 142.1 | 7.1 | 0.5 | 1.2 | 12.0 | 20 | 16 | 21 + others | Others: 44% of GM |
| PDA | 72.9 | 14.6 | 3.7 | 4.5 | 35.5 | 10 | 13 | 6 + others | Others: 10% of GM |

*Notes:*
- *Customer ABC analysis is without Others category*
- *CM: Contribution margin*
- *To Interviewer: hand over Exhibit materials to Interviewee at Question 3*

# Innovation in Chemical Products

## Author: BASF Management Consulting

**Exhibit Takeways – For Interviewer only**

### Exhibit 1

- **Fiber Polymers:** Further adjust (global) operating model towards commodity / standardized approach
- **PDA:** Defend position & further differentiate applications based on end-consumer needs

### Exhibit 2

- **Fiber Polymers:** already very lean from R&D perspective
- **PDA:** Continue to invest in R&D together with key accounts, standard offerings for others
- **PDA:** Utilize value of products for market approach

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# National Health System

Author: Ken Wen ('20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 2 |
| **Difficulty level – Creativity** | 3 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Interviewer |
| **Case type** | Operations/Processes |
| **Industry** | Health System |

# National Health System

Author: Ken Wen ('20D)

## Case Prompt

The Sydney Department of Health recently discovered that elderly people (aged above 60) are not satisfied with the medical services they currently receive both in terms of time and quality. Your consulting firm is brought in by the department of health to fix the problem.

**Q1.** What are the main factors you would like to consider in order to improve the medical services for elderly people?

## Provide the answers only if candidates asked:

- **Current health care process in Sydney**: people typically make an appointment at and visit community medical centres first. If the General Practitioners (doctors in community medical centres) believe patients should be treated in hospitals, the patients will then go to a hospital (also need to make an appointment online).
- **Unsatisfaction**: Elderly people are generally quite happy with the services they received from community medical centres. But they are not happy with the services provided by hospitals.
- **Objectives**: there are no other objectives other than improving medical services in hospitals for elders

## Overall Guide to interviewer

- *This case has a lot of brainstorming questions. Interviewer should push candidate to think the actual processes involved in treating elderly people.*

  

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# National Health System

Author: Ken Wen ('20D)

**Customer (Elderly patients)**

- Needs/preferences: what do old patients need/prefer when they seek medical services. How do their needs differ from those of people less than 60 years-old?
- Which part of the services are they not happy with?

**Processes (where can things go wrong)**

- Coming to hospital: booking (system too hard to use?); transportation (too far? No direct routes to hospitals?)
- In hospital: waiting (too long? No designated seats?) treatment (mistreatment? Takes too long? Too expensive?)
- Out of hospital: lack follow-up cares? Too hard to reimburse medical insurance?

**Feasibility (can solutions be implemented?)**

- Funding: will the solutions require significant government investment? Will government provide funding?
- Potential push-backs: will the solutions potentially trigger push backs from important stakeholders? (hospitals, unions, etc.)

**Prompt for interviewer**

- *Interviewee should have a clear logic linking each block.*
- *Interviewee should at least mention "processes". If not, push interviewees in these directions.*

*Note: This is only one way to tackle the case, and there will be other alternatives to the suggested framework*

# National Health System

Author: Ken Wen ('20D)

## Q2: Brainstorming – Customer Journey

- *If candidate asks about older patients' preferences in terms of medical care, ask the candidate to brainstorm the possible differences between elderly and younger patients. If candidate does not ask, this part can be skipped.*
- ***Q2**. Now our client would like to turn their attention to the full customer journey of elderly patients seeking medical services, and they would like to find out where things can go wrong (focus is still on hospitals). Please brainstorm a few ideas why elderly patients might not be happy along the customer journey*

**Answer:**
*This is a brainstorming question. Performance is assessed on structure and creativity. Suggested structures include: process (coming to hospitals, in hospitals, out of hospitals); time-quality-price; and any other structures that make sense.*
*Great candidates should be able to generate at least 5 ideas*

### Coming to Hospital

- Registration system: is it user friendly? Will elderly people find it easy to use?
- Available time: Should they want to make an appointment, can they book a time within 3 days? Or is the earliest available time in 3 weeks from now?
- Transportation: easy public transportation system to hospitals?

### In hospital

- Waiting time: how long do they have to wait in hospital?
- Treatment: takes too long? Mistakes/ ineffective treatments? Expensive procedures/ specialist fees/ drugs?
- Hospitalization: horrible conditions (beds, toilets, etc)? Poor attitudes?

### Out of hospital

- Follow-up advices: lack of follow-up advices/cares
- Hard to reimburse medical bills

# National Health System

Author: Ken Wen ('20D)

## Q3: Brainstorming – Root Causes

*Q3. After reviewing the customer journey, it became clear that hospital doctors spent too long diagnosing elderly patients and often make mistakes. What could be the reasons that might cause the issues?*

**Answer:**
*This is a brainstorming question. Performance is assessed on structure and creativity. Suggested structure (one of many):*

### People factors

- Doctors are capable, but make mistakes: worked for too many hours due to lack of doctors; don't have proper incentives/policies that promote best practices
- Doctors are not capable: how can we improve this situation?

### Non-People factors

- Medical system: maybe elder generations' medical histories are not imported into the existing medical system, so doctors have to spend more time finding elder patients' medical histories to complete diagnoses
- Medical equipment: medical equipment is old or defective

## Prompt for interviewer

*After brainstorming, confirm that the problems are that the medical system does not store medical histories for people over 60 and hospital doctors are working long hours due to staff shortages*

# National Health System

Author: Ken Wen ('20D)

## Q4: Calculations

*Q4. After assessing the situation, the client is looking to start an initiative that converts specialists from community medical centers into special doctors that only cure elder patients, thereby relieving hospital doctors.*
*Currently, there are 1000 specialists in Sydney. How many additional specialists do they need to hire from outside of Sydney to treat all the elderly patients in Sydney?*
*This is a brainstorm question. Push candidates to estimate both of the demand and supply.*

**Answer:**
*Demand:*
*Assume total population in Sydney is 16M, and population distributes evenly across ages.*
*Assume on average each elderly person visits doctors 4 times per year.*
*16M x (20/80) x 4 = 16M visits per year*

*Supply:*
*Provide to candidate that each specialist takes 30 mins to treat patients*
*Assume each specialist works 8 hours a day, 5 days a week and 50 weeks a year.*
*# of patients treated by one specialist = 2 x 8 x 5 x 50 = 8000*
*Additional specialists needed = 16M/8000 – 1000 = 2000 – 1000 = 1000*

## Prompt for interviewer

Great candidate: apart from calculating the right number, great candidates should be able to proactively state the implication of the number. Is 1000 a large number? Is it easy to hire the 1000 specialists? Both sides of answers would be ok as long as candidate provides logical explanations.

# National Health System

Author: Ken Wen ('20D)

## Solution & Recommendations

To conclude, the candidate should include the following:

Recommendation:

- Elderly patients' unhappiness towards medical services in Sydney is largely caused by the long treatment time and inaccurate treatment methods. One of the solutions to reduce mistakes is to establish designated specialists to cure elderly patients exclusively because
    - it promotes specialization (specialists only focus on elderly patients and hospital doctors only treat normal patients)
    - Hiring additional 1000 specialists from outside of Sydney doesn't seem to be a very challenging task given they can hire specialists from Melbourne, Brisbane, Adelaide or even internationally

Next steps:

- Look at other ways to improve medical service such as: improve medical system to incorporate elder patient's medical histories

# Robot Co.

Author: Yajing Huang ('20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 5 |
| **Difficulty level – Creativity** | 5 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Interviewer |
| **Case type** | Market entry, Pricing, Creativity, etc. |
| **Industry** | Robotics, Artificial intelligence |

# Robot Co.

Author: Yajing Huang ('20D)

## Case Prompt

*Robot& Company (Robot Co.) is a company headquartered in California, USA and Shenzhen, China, the two important world capitals for hardware innovation. In early 2020 catering has undergone significant change, especially with the breakout of Covid-19. Robot Co. is catching up the market trend with the rollout the Gundam-Ⅱ, a robot specifically designed for deliver dishes& drinks from kitchen to the dining area. The robot execute the orders in the system instantly and will be disinfected itself at the end of each mission. The duration to disinfect last 5 seconds each time. The CEO of Robot Co. has tasked us with figuring out whether to launch Gundam-Ⅱ in Singapore, and how to price this new product.*

## Information to be used to answer clarifying questions

- *Robot Co. has its R&D center located in California, and Shenzhen. Its manufacturer plant located in Shenzhen and its sales network widely spread over North America, North Asia and Southeast Asia*
- *Robot Co., particularly Gundam-Ⅱ (patented) has strong technical leadership position in the market, and no potential competitors in foreseeable 2-5 years*
- *Instead of selling Gundam-Ⅱ to restaurants, Robot Co. is planning to lease Gundam-Ⅱ to restaurants for a monthly rental payment*
- *No-contact service has become the new fashion in restaurants, not only because such way of serving reduce the risks of transmission virus, but since it also helps management to reduce the labor costs*

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# Robot Co.

Author: Yajing Huang (‘20D)

## Guide to interviewer

- *Topics being tested: Creativity, Market Entry & Pricing Strategy. This is an interviewer-led case and contains four questions. The interviewer will walk through each of the questions one-by-one*
- *No general framework is needed in this case, but for question #2/3/4 each need to address a few bullet points*
- *Question #2 & #4 are open questions, but candidates should give a strong rationale for their proposed answers*
- *If time does not allow to go through the entire case, the interviewer can skip question #1*

## Guide for use of exhibits

**Exhibit 1**

E.g., Hand out this exhibit with Question #1
Key Insights:
a) Examine candidate's sensitivity regarding to numbers
b) Guide the candidate out if she/he cannot find out correct answer at first

**Exhibit 2**

E.g., Hand out this exhibit when candidate asks about efficiencies regarding Gundam-Ⅱ
Key Insights:
a) For the same workload, Gundam-Ⅱ is twice as efficient
b) An excellent candidate will also realize that Gundam-Ⅱ can work 24 hours a day; while humans take 8-hour shifts

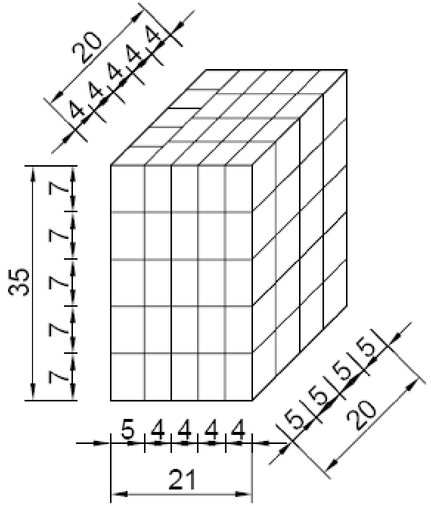
# Robot Co.

Author: Yajing Huang (‘20D)

## Question #1

*The Gundam- Ⅱ’s loading capacity is adjustable, and its maximum loadable volume is 20*21*35 inch. Super Drink is a No.1 popular drink in restaurants of Singapore. Super Drink has an outer packaging size of 5*7*4 inch. With the full capacity of the Gundam- Ⅱ, what is the maximum number of Super Drink that can be transport at one time? (Gundam- Ⅱis capable of adjusting the direction of Super Drink packages that are being placed.)*

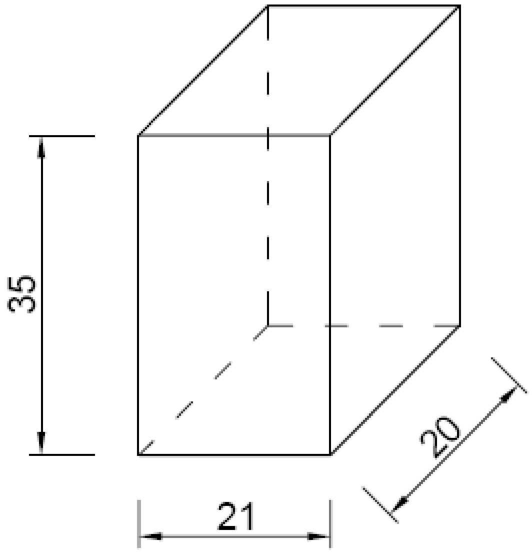
*Answer：*
*This is a very tricky question.*
***The right correct answer is 105.***
***Candidates may easily get a wrong answer of 102.***



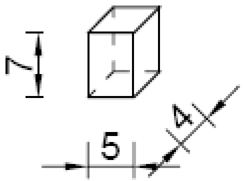
# Robot Co.

Author: Yajing Huang ('20D)

## Exhibit 1 – Dimension of Gundam-Ⅱ in full capacity




**Dimension of Gundam-Ⅱ at full capacity**
(Unit inch)




**Dimension of SuperDrink**
(Unit inch)

# Robot Co.

Author: Yajing Huang ('20D)

## Question #2

*After a successful pilot project in Singapore, Robot Co. is planning to rent out Gundam- Ⅱ to restaurants through monthly rental payments. How should they price the services of Gundam- Ⅱ? What factors should be considered?*

*Answer：*

- *The cost of Gundam- Ⅱ, broken down on a per-month basis, is*
  *SGD 9000 / (12 months/year * 5 years lifespan) + SGD 100 = SGD 250 / month*

- *The value created by a single Gundam- Ⅱ unit, per month, is*
  *SGD 1,600 * (16min human server / 8min Gundam server) * 1.5 shift factor * 80% replaceable functions = SGD 3,840 / month*

- *Robot Co. has strong technical leadership position in the market, without any potential competitors in the near future. As the monthly cost is much too smaller than the value it has created,* ***a value-based pricing strategy is preferred. The exact monthly rental is an open question, but the proposed price should have reasonable justification***

# Robot Co.

## Author: Yajing Huang (‘20D)

*Additional information to be given to candidate after they brainstorm what factors will affect the pricing decision*

| Cost Side | Value-creating Side |
|---|---|
| • ***Manufacture cost:***<br>*The manufacturing costs of a single Gundam- Ⅱ is $9,000 SGD*<br><br>• ***Useful lifespan:***<br>*5 years*<br><br>• ***Maintenance cost:***<br>*$100 SGD* | ***Hand out Exhibit 2 when been asked***<br>• ***What percentage of jobs can be replaced by Gundam- Ⅱ** -- Gundam- Ⅱ is capable of picking-up /delivering /placing dishes & beverages onto the table, allowing it to replace 80% of servers’ function. The remaining 20% are functions that require human interaction*<br>• ***Single task efficiency** – For a standard meal of 4 customers, a Gundam- Ⅱ takes 8 mins, but a server takes 16 mins (task breakdown refer to Exhibit 2*<br>• ***How long a server work during a working day?** -- Restaurants in Singapore open 12 hours a day, and servers work 8 hours per working day. On average a single position needs to have 1.5 shift. While the Gundam- Ⅱ will work through 12 hours without rest*<br>• ***What is the month salary of a server?** -- Average monthly salary is $1,600 SGD* |

# Robot Co.

Author: Yajing Huang (‘20D)

## Exhibit 2 – Efficiency of Gundam-Ⅱ vs. server

**Single task efficiency of Gundam-Ⅱ vs. single task efficiency of server**
- To deliver same number of dishes & beverages (a standard meal of 4 customers)

| | Gundam-Ⅱ | Server |
|---|---|---|
| Pick up dishes & beverages | 1.5 min * 1 time | 2 min * 4 times |
| Deliver dishes & beverages | 2.5min * 1 time | 1.5 min * 4 times |
| Place dishes & beverages | 1 min * 4 times | 1 min * 4 times |
| **Total** | **8 min** | **16 min** |

# Robot Co.

Author: Yajing Huang ('20D)

## Question #3

*If Robot Co decides to charge a monthly rental of $1,000 GSD per robot, estimate the market size of Gundam- Ⅱ in Singapore. Before calculating, what are the numbers you need to know and what are your key assumptions?*

*Answer:*

- *Numbers to know:*
  - ✓ *Number of full-service restaurants → 4,000 (provide to candidate once identified)*
  - ✓ *Number of servers in each restaurant → 15 (provide to candidate once identified)*
  - ✓ *Opening hours per working day → 12 (provide to candidate once identified)*
- *Assumption:*
  - ✓ *Full-service restaurants have the same size, number of servers and opening hours*
  - ✓ *The percentage of full-service restaurant willing to convert their service from human interaction based to robot human interaction based (please indicate the rationale behind the percentage → taken here as 70%)*

*Market Size:*

*[4,000 restaurants] * [15 servers/restaurant] * [80% replaceable functions] / [1.5 shift factor] / [2 efficiency factor] * [70% restaurants willing to convert] * [$1,000 monthly rental per robot] * [12 months]*
*= $134,400,000 yearly market size*

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# Robot Co.

Author: Yajing Huang (‘20D)

## Question #4

*After the analysis, if Robot Co, decided to enter the Singapore market, what are the risks that Robot Co should look at and how can they mitigate these risks?*

***Answer:*** *This is again an open question without a standard answer. A simple answer is given here as a reference: the candidate may discuss the risks from these three major categories:*

- ✓ *Regulation risks*
- ✓ *Gundam- Ⅱ operational risks*
- ✓ *Public perception risks*

## Guide: Good vs Great Case

A good candidate will cover these points:

a) Correctly come up the maximum number of Super Drink that can be transport in full capacity of Gundam- Ⅱ with interviewer’s hint
b) Recognize that robot have an advantage of working 24 hours without taking any holiday, with interviewer’s hint
c) Notice that not every restaurant are willing to adopt robot, particularly the luxury restaurant featured with extravagant services

A great candidate will cover these points:

a) Correctly calculate the maximum number of Super Drink that can be transport in full capacity of Gundam- Ⅱ without any hints
b) Immediately recognize that robots have an advantage of working 24 hours without taking any holiday
c) Notice potential risks of adopting the robot

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# Seachange

Author: Miguel Vera-Cruz ('20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 3 |
| **Difficulty level – Creativity** | 4 |
| **Difficulty level – Structure** | 4 |
| **Case led by** | Candidate |
| **Case type** | Market Entry |
| **Industry** | Tourism and Leisure |

# Seachange

Author: Miguel Vera-Cruz ('20D)

## Case Prompt

*You have been relatively successful in your post-MBA career and are considering quitting to move to a holiday destination in Southeast Asia and open a resort there. Should you, and if so, where should you open it?*

## Information to be used to answer clarifying questions

- *You plan to employ 5 people in your resort*
- *You are considering leaving your current position to build this resort full time*
- *At a minimum, you want this resort to make as much cash flow as you did in your last job*
- *It is up to the candidate to apply the salary and conditions of their 'current job'*
- *You are only considering resort destinations. You are tired of the bustle of city life!*

# Seachange

Author: Miguel Vera-Cruz (‘20D)

## Guide to interviewer

- *Recommended to break this down into three parts, each testing various aspects:*
  - *Qualitative: to test their creativity and ability to consider diverse factors, as well as apply their own personal experience*
  - *Market sizing: to test how they would break down a very high-level market analysis in the most relevant way*
  - *Quantitative: to identify the formulae to apply for the most relevant information*
- *Establishing a goal and synthesis are particularly important: the candidate must know how exactly s/he would assess if it is a good idea, and compare their status quo with the financials*

## Guide for use of exhibits

**Exhibit 1**

Show the table at the start of the case
Key Insights:
a) Phuket would have the biggest market but it is also the most saturated
b) Boracay has the smallest but the fastest-growing market with the least competition

# Seachange

Author: Miguel Vera-Cruz ('20D)

## Sample Framework

- *Qualitative*
  - *Entertain a qualitative discussion about the factors you would think of*
    - *Current lifestyle*
    - *Cultural knowledge*
    - *Culture shock*
    - *Type of resort and activities you would want to host*
- *Quantitative*
  - *Status quo: how much money am I making in my current job in this hypothetical scenario?*
  - *Revenue:*
    - *GDP/capita and relationship with salary*
    - *Number of tourists (international, domestic)*
    - *Tourist receipts (international, domestic = % of salary spent on tourism)*
    - *Average length of stay*
  - *Cost assumptions:*
    - *Wages x number of employees*
    - *Land costs*
    - *PPE costs*

# Seachange

Author: Miguel Vera-Cruz (‘20D)

## Market Sizing

*Additional information to be provided to candidate:*

- *Costs*
  - *Wages are 20% of the operating cost of a resort in any destination*
  - *You plan to employ 5 people in your resort*
- *Revenue Branch*
  - *International tourists spend the same amount of money per day regardless of destination*
  - *The average international tourist spends 4 days at a resort*
  - *The average international tourist spends 7 days in the country*
  - *The tourist industry grows proportionally with the economy*
  - *The average local spends about 2% of their income on domestic tourism; this is expected to be constant as the economy grows*
  - *You realistically believe that you can reach a market share that is the mean of all resorts in the destination*

*Example Calculation (if Phuket is chosen as target)*

- *Assuming 50% of tourist receipts are spent on accommodation: [USD 65 B] * 50% / 39 M international tourists = approx. USD 800 pax*
- *Average country stay is 7 days: USD 800 / 7 = approx. USD 115 potential revenue per person per day*
- *Assuming 100 rooms in a resort, 2 persons per room and 80% average occupancy this yields USD 115 * 100 rooms * 2 persons * 365 days/year * 80% occupancy = USD 6.6 M per resort*
- *200 resorts means 200 * USD 3.3 M = USD 1.32 B market size (annualized)*

# Seachange

Author: Miguel Vera-Cruz ('20D)

## Sample Solution & Recommendations

- *Whether this is a good idea depends on the status quo provided at the start: how much money are they making in their hypothetical current job and how much could they make with the potential resort venture?*
- *Arguments should cover quantitative (potential profit versus previous salary) and qualitative factors (e.g., long-term growth, more attractive life-style away from the city) and be clearly explained*
- *References should be made to the exhibit and the insights that were drawn from it*
- *Ideally, next steps and potential risks should be outlined*

## Guide: Good vs Great Case

A good candidate will cover these points:

a) Apply the math to identify the most lucrative market
b) Draw the quantitative back to the status quo
c) Clearly state 'why' they would decide for/against this career change

A great candidate will cover these points:

a) Factor in the qualitative criteria
b) Consider the long-term growth of the market
c) Consider market growth projections, risks and mitigation

# Seachange

Author: Miguel Vera-Cruz ('20D)

## Exhibit 1

| | Bali | Penang | Boracay | Phuket |
|---|---|---|---|---|
| Country population | 270,000,000 | 30,000,000 | 110,000,000 | 70,000,000 |
| Country GDP/capita (USD) | 14,000 | 33,000 | 10,000 | 20,000 |
| Country GDP/capita growth rate | 6% | 3% | 7% | 2% |
| Country Int'l visitor arrivals | 16,000,000 | 26,000,000 | 7,000,000 | 39,000,000 |
| Country tourist receipts (USD) | 15,600,000,000 | 21,800,000,000 | 9,700,000,000 | 65,200,000,000 |
| Local airport passengers handled | 24,000,000 | 8,000,000 | 2,500,000 | 19,000,000 |
| # of resorts in destination | 250 | 100 | 20 | 200 |

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies (‘20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 3 |
| **Difficulty level – Creativity** | 3 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Mixed |
| **Case type** | New Product Launch |
| **Industry** | Insurance |

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Case Prompt

*Insuraco is a large US insurer that's looking to grow. They currently sell a wide range of insurance products to US consumers and are considering developing a new product: $5/month smartphone insurance for under-30s.*

*Insuraco's management is excited about the opportunity of selling to this large, under-insured group. However, before they develop the idea further, they'd like to know whether this is indeed a good idea, and, if so, how they should roll-out this new product.*

## Information to be used to answer clarifying questions

- *Insuraco's primary objective is to maximize profit, particularly in the first year the product is released*
- *Insuraco currently sell their products through agents*
- *Insuraco are only interested in selling this product in the US (and are licensed to do so in all US states)*
- *Insuraco's investment income can be ignored in any financial calculations*

  

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# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Guide to interviewer

- *This case tests the candidate on three concepts:*
  1. ***Market sizing**: The candidate is first asked to estimate the market's annual revenue*
  2. ***Profitability**: The case then introduces the "Combined Ratio" (used by insurers to measure profitability) for the candidate to calculate the profitability of two possible distribution channels*
  3. ***Brainstorming**: The case concludes by asking the candidate to discuss non-financial considerations of the product launch*
- *Allow the candidate to explore. They will likely go to market-sizing early, but may need guidance towards customer buying preferences/distribution channels*

## Guide for use of exhibits

**Exhibit 1 -** *Present when asked about customer buying preferences or distribution channels*

Key Insights:

a. The website is more effective at reaching and signing-up customers
b. However, selling through agents is cheaper to set-up and operate
c. Calculations will show that both distribution channels have the same profit in year 1
d. However, the website is more attractive as development costs are a one-time expense

**Exhibit 2 -** *Present when asked to define the Combined Ratio*

Key Insights:

a. The Combined Ratio is a "cost-centric" measure of profitability
b. 100% - Combined Ratio ≈ Profit Margin

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# Insuraco: Smartphone insurance for under-30s

## Author: Tom Davies ('20D)

### Sample Framework & Notes

Smartphone insurance for under-30s

- Is the market attractive?
  - Size & Growth
    - Ask candidate to market size (see next slide)
  - Competition
    - No competitors in this space
    - Most smartphone insurance is included in home/contents insurance, which most under-30s don't have
  - Customers
    - When asked about buying preferences, present Exhibit 1
- Can Insuraco enter effectively?
  - Product
    - $5/month smartphone insurance, covering all standard causes of loss/damage.
    - No new, novel types of coverage
    - Considering selling through a website
  - Capabilities
    - Insuraco has good experience in pricing insurance and has a strong, respected brand
    - When asked about distribution channels, present Exhibit 1

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# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Market sizing – suggested structure

- ***When the candidate asks for details about the market size, ask that they estimate the market's annual revenue***
- *Sample structure:*

Market size: under-30s smartphone insurance in the US

US Population
x
% under 30
x
% that own a smartphone
x
% that are interested in smartphone insurance
x
% that would pay for smartphone insurance
x
Annual premium per customer

## Sample calculation

- ***US Population****: ~ 320m*
- ***% under 30****: Average life expectancy in US ~ 80 years. Assume equal distribution across all ages, so ~4m people of each age. (30 x 4m)/320m ~ 35%*
- ***% that own a smartphone****: Need to account for:*
  1) *Smartphones are not owned by most children < ~15.*
  2) *Smartphones are extremely popular for those > ~15*

  *E.g. assume 0% for under-15s and 80% for 15-to-30-year-olds (~40% overall)*
- ***% that are interested in smartphone insurance****: Insurance is not widely used by this group, so will be low. ~20% acceptable*
- ***% that would pay for smartphone insurance****: Again, expected to be low. ~20% acceptable*
- ***Annual premium per customer:*** *$5/month x 12 months = $60/year*
- ***ANSWER ~ $100m/year***

*Note: The candidate's reasoning and structure is more important than their final answer.*

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies (‘20D)

## Distribution Channels (based on Exhibit 1)

*When the candidate asks about customer buying preferences or distribution channels, present Exhibit 1. They should proceed to calculate the profitability of the two distribution channels. Additional information (only provided to candidate when requested):*

- *Definition of the “Combined Ratio” – **present Exhibit 2.** This is a commonly used metric in the insurance industry*
- *Definition of the “Conversion Rate” – % of website visitors or agent enquiries that purchase the insurance*

***Profitability of Website in year 1***

a. **120k paying customers expected in first year:** 600k visits x 20% conversion rate
b. ***Average annual profit per customer = $0.75:*** *$5 monthly premium x 6 months (average contract length at end of first year) x 2.5% (1- 97.5% combined ratio)*
c. ***$90k total operating profit in first year:*** *a x b*
d. ***-$10k total profit in first year****: $90k - $100k development costs*

***Profitability of Agents in year 1***

a. **50k paying customers expected in first year:** 400k enquiries x 12.50% conversion rate
b. ***Average profit p.a. per customer = $1.50:*** *$5 monthly premium x 6 months (average contract length at end of first year) x 5% (1- 95% combined ratio)*
c. ***$75k total operating profit in first year:*** *a x b*
d. ***$25k total profit in first year****: $75k - $50k development costs*

*Therefore selling via agents looks like the better option…*

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies (‘20D)

## Distribution Channels (based on Exhibit 1) – continued

***However**, tell the candidate that projections indicate a 10% increase in website development costs will change the conversion rate to 30%.*
***Does this change their answer?***

- ***180k customers now expected in first year:** 600k x 30% conversion rate*
- ***$135k total annual profit:** $0.75 x 180k*
- ***$25k total profit at end of 1st year**: $135k - $110k development costs*

*Therefore, both options have first-year profits of $25k.* ***Ask the candidate what their advice is now…***

*Additional information (only provided to candidate when requested):*

- *Combined Ratios and Conversion Rates are expected to remain unchanged in the future*
- *Future # of website visits and agent enquiries are unknown*
- *In the long-term, average contract length is expected to be ~3 years*

*Candidates should note that since Development Costs are a one-time expense, the website should be more profitable after the first year. However, they should clarify that if the # of visits or enquiries changes in the future (which seems likely) the profitability of the options would change.*

*****Bonus points if the candidate notices that an average contract length of ~3 years makes the website even more desirable*****

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Next Steps (Non-financial considerations)

***Now ask the candidate what other (non-financial) considerations need to be made regarding the roll-out of this new product***

*The candidate should discuss qualitative considerations in a structured way. Topics could include:*

- ***Marketing/Branding –*** *How are Insuraco going to make insurance (often seen as a stuffy and conservative product) relevant, cool and desirable to the U30s?*
  - ***Marketing****: Does Insuraco have the capability to pull off marketing to this age group, or does it need to hire new marketing expertise?*
  - ***Branding****: Should Insuraco establish a new brand to sell this product, rather than selling under its existing brand?*
- ***Management of existing agent relationships –*** *Insuraco is currently heavily reliant on agents; it sells all its products through them! Will adopting a new distribution channel endanger Insuraco's relationships with its agents?*
- ***Competitor response*** *– How can Insuraco defend its turf? We know that the product is easily replicable (insurers already offer it through home/contents insurance and no new, novel coverages are being offered), so how can Insuraco differentiate its offering?*
- ***Growth opportunities****: Could releasing this product "open the door" to further growth? What other insurances could Insuraco sell to the U30s (e.g. travel insurance, home renters' insurance, auto insurance)? How can we foster brand loyalty so that we are customers' insurer of choice for "bigger ticket" insurances purchased later in life (e.g. homeowners' insurance, life insurance, medical insurance)?*

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Sample Solution & Recommendations

- ***Recommendation**: Sell this new product via a website for a first-year profit of $25k*
- ***Why?**: Market is expected to be large ($100m annual revenues), competitor-free and profitable (combined ratio <100%)*
- ***How?**: Although the costs of setting up and operating a website are higher than other distribution channels, it is expected to be the most profitable in the long-run because 1) it signs up the most customers, and 2) development costs are a one-time expense*
- ***Risks**: Uncertainty around future # of site visitors and agent enquiries*
- ***Next steps**: Conduct market research to understand future trends in site visits and agent enquiries; develop marketing and branding strategy; manage agent relationships; consider competitor response; explore growth opportunities*

## Guide: Good vs Great Case

| A good candidate will: | A great candidate will: |
|---|---|
| a) Confirm that the opportunity does indeed look interesting – a big, profitable and (currently) competitor-free market<br>b) Clarify the definition of the "Combined Ratio" before starting calculations in Exhibit 1<br>c) Identify the website as the favored distribution channel | a) Identify assumptions that are fixed (e.g. Combined Ratio, Conversion Rate) and variable (e.g. Av. Contract Length, Future # of Website Visits/Agent Enquiries) and proactively discuss what will happen if they change<br>b) Notice that 100% - Combined Ratio ≈ Profit Margin<br>c) Discuss the growth opportunities of rolling out this new product (e.g. developing and cross-selling new products, effect of winning customer loyalty at early age) in the qualitative discussion |

# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies ('20D)

## Exhibit 1 – Insuraco's Potential Distribution Channels – 1st Year Projections

| | Development Costs | Year 1 expected website visits/agent enquiries | Conversion Rate | Combined Ratio |
|---|---|---|---|---|
| Website | $100,000 | 600,000 | 20.0% | 97.5% |
| Agents | $50,000 | 400,000 | 12.5% | 95.0% |

Average contract length at end of first year is 6 months

Insuraco will only invest in one channel for this product

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# Insuraco: Smartphone insurance for under-30s

Author: Tom Davies (‘20D)

## Exhibit 2 – Combined Ratio Definition

$$\boldsymbol{Combined\ Ratio} = \frac{\boldsymbol{Total\ Costs\ (i.e.\ Claims\ \&\ Operating\ Expenses)}^{*}}{\boldsymbol{Total\ Revenue\ (i.e.\ Premium)}}$$

** Does <u>not</u> include Development Costs*

# StarBus Australia

Author: Ken Wen (‘20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 3 |
| **Difficulty level – Creativity** | 3 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Mixed, but lean towards Candidate |
| **Case type** | Investment Assessment |
| **Industry** | Manufacturing |

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# StarBus Australia

Author: Ken Wen ('20D)

## Case Prompt

Your client, an Australia based PE firm, wants to acquire StarBus Australia which is the biggest bus manufacturer in Australia. Your client has approached you, a Consultant, to assess the transaction. In the end, you should be able to advise the client whether this is a good investment. What factors will you consider first?

## Provide to candidate only if asked:

- Customers: StarBus sells its buses directly to both public and private schools throughout Australia; the schools are the only customers of StarBus
- Product: StarBus only manufactures one type of bus that has a 10-year life cycle

## Overall Guide to interviewer

- *This case is designed to test candidates' ability to drive a case. Interviewers should deliberately push candidates. Interviewer can use prompt languages such as "so what…", "where do you want to start next…", etc.*

# StarBus Australia

Author: Ken Wen ('20D)

| Market Attractiveness | Competition Landscape | Transaction |
|---|---|---|
| • Market size: What is the size of school bus market? (number of buses schools will purchase per year)<br>• Growth of the market: over the next 3-5 years, will the market grow? | • Market shares of StarBus & competitors<br>• Prices/margins: compare StarBus' prices & margins with its competitors<br>• Products: does StarBus sell similar buses? Do they have similar customers? | • Pricing: Is the transaction fairly priced? Does return meet client's required IRR?<br>• Does our client have the financial resources to fund the acquisition?<br>• Does the acquisition provide synergies with the client's portfolio companies? |

## Prompt for interviewer

- *Interviewee should at least mention "market" and "competition/margins analysis". If not, push interviewees in these directions.*
- *Interviewer should push candidate to elaborate why they want to look at these aspects, and how understanding the three aspects will help them reach a conclusion. Example:*

  ***Interviewer:*** *why do you want to look at products?*

  ***Interviewee:*** *I want to assess StarBus's ability to generate profits by comparing its product margins with its peers. To ensure comparability, I need to understand whether StarBus is selling the same type of products.*
- *After the candidate provides a reasonable explanation for transaction,* ***interviewer states: assume the transaction is fairly priced, and financing is not an issue for client (meaning interviewees don't need to assess transaction category), what information do you need to assess the Market Attractiveness?***

*Note: This is only one way to tackle the case, and there will be other alternatives to the suggested framework*

  

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# StarBus Australia

Author: Ken Wen ('20D)

## Part 1: Market related analysis – Market size

Guide the candidates to the market size path, and ask the candidate **Question 1: Why don't you estimate the size of School Bus market in Australia?**
Information can be shared upon request, or candidates can make their own assumptions:

- Australian Population = 25M; Bus useful life = 10 years; Bus capacity = 50 students;
- Population distributes evenly based on age; Average life expectancy = 80 years; Students aged 7-18 all attend schools

School Bus Market size = # of buses required per day x # of school days per year (200) ÷ Bus loading and purchase factors

# of buses required per day:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| # of students taking buses (age 7-12) | X | % students taking buses | = | Australia population (25M) | X | % of 7-12 population (6/80) | X | Assume 60% |
| # of students taking buses (age 13-15) | X | % students taking buses | = | Australia population (25M) | X | % of 13-15 population (3/80) | X | Assume 30% |
| # of students taking buses (age 16-18) | X | % students taking buses | = | Australia population (25M) | X | % of 16-18 population (3/80) | X | Assume 20% |

Bus loading and purchase factors = Bus loading capacity (50) X Useful life of school bus (10)

**Answer: 640,000 buses per year**

## Good vs Great candidates

A good candidate will

1) Justify necessary assumptions
2) Arrive a close answer without serious mistakes
3) Articulate the building blocks of the equation

Additionally, a great candidate will also

4) Link the result to the overall problem (does 640k buses per year mean the market is attractive?)
5) Drive the case forward (is additional information required to determine the attractiveness of the market?)

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# StarBus Australia

Author: Ken Wen (‘20D)

## Part 2: Market related analysis – Market growth

Candidates should now turn their attentions to market growth. If not, push candidate to this path. When asked, provide the below information:

- Driver of growth: growth is usually driven by population growth. On average, Australia population has been growing at 2% per year.
- Annual growth rate over the past three years: 5%

Push the candidate to think about the high growth rate (5% vs 2%), and ask **Question 2: what can cause the high growth rate?**
*Brainstorming question; provide the following information if candidate mentions ‘Regulation/Policy changes’: 3 years ago, Australian government introduced a new safety regulation that requires all schools to gradually replace their old buses with new buses within 3 years.*

*Interviewer should push candidate to reach an interim conclusion and to drive the case forward to ‘Competition Landscape’ section.*

## Good vs Great candidates

| A good candidate will | Additionally, a great candidate will |
|---|---|
| 1) Ask the right questions to understand the market growth<br>2) Notice the abnormal growth rate, but didn’t question why<br>3) Provide reasonable and structured answers to the brainstorming question | 4) Proactively considers whether the high growth rate will continue, and questions what drives the high growth rate<br>5) Reach an interim conclusion that the 5% growth rate will not continue in the future; in fact, the market is likely to decline in the next 5-7 years.<br>6) Link the result to overall question (is the market attractive? – Answer is no) |

# StarBus Australia

Author: Ken Wen ('20D)

## Part 3: Competition landscape – Market share analysis

Guide the candidate to competition landscape. When candidate mentions market shares, present Exhibit 1 and ask
**Question 3: what do you make of Exhibit 1?**

When asked, provide the below information:

- Products: school buses are traditionally highly commoditized products; StarBus and its competitors manufacture the same type of buses with minimum differences

## Good vs Great candidates

A good candidate will

1) Identify the fact that StarBus has the highest market share in terms of revenue, but its unit market share is comparatively not as high
2) Deduce that StarBus must be selling its buses at a higher prices than its competitors

Additionally, a great candidate will

4) Think about why StarBus charges a higher price for its products
5) Drive the case forward by analyzing cost structure/margins

  

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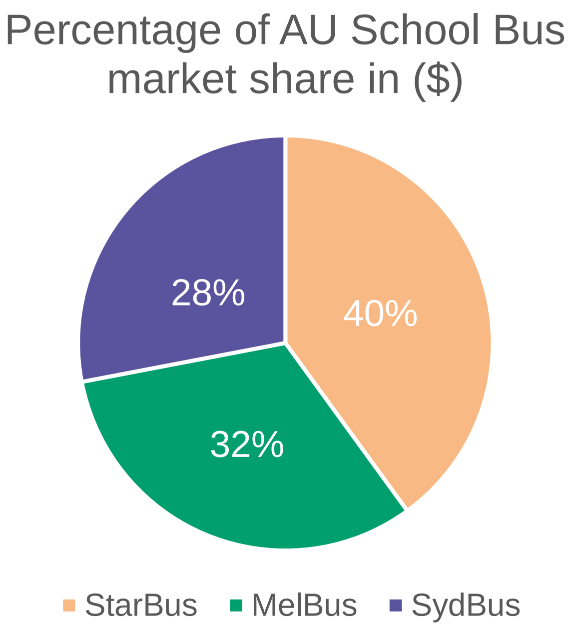
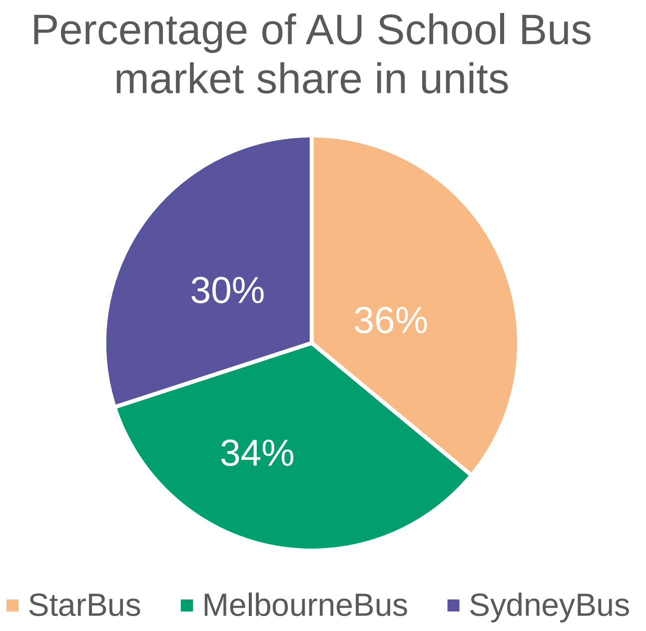
# StarBus Australia

Author: Ken Wen ('20D)

## EXHIBIT 1 (Market share analysis)

### EXHIBIT 1



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# StarBus Australia

Author: Ken Wen ('20D)

## Part 4: Competition landscape – Margins analysis

Provide Exhibit 2 if candidate requires cost/margins analysis. Ask
**Question 4: what do you make out of Exhibit 2?**

Candidates might rush to reach a conclusion that the purchase of StarBus is not a good investment because StarBus' lower profit margin. Interviewer should push candidates to think deeper: although StarBus' current profit margin is not favourable, candidates need to consider whether the problem can be solved relatively easily, hence providing a good turnaround potential for the PE client.

## Good vs Great candidates

| A good candidate will | Additionally, a great candidate will |
|---|---|
| 1) Notice that StarBus's gross margin is 10% lower than its peers; operating efficiency is the same as its competitors<br>2) Mention that the lower gross margins are caused by higher COGS | 3) Dive deeper into the potential causes of the higher COGS, and explain the rationale behind.<br><br>For example, the candidate can say: It looks like StarBus occurs higher COGS than the industry average, which probably explains why StarBus is charging a higher price on its buses. However, I don't want to rush to a conclusion yet because if the problem can be solved, it offers a very opportunity for our PE client to turnaround the business and exit at a higher price.<br>COGS is the function of direct material, direct labor and overheads. Can I please look at the data on direct materials first? |

# StarBus Australia

Author: Ken Wen ('20D)

## EXHIBIT 2 (Margins analysis)

### EXHIBIT 2

| | STARBUS | MELBUS | SYDBUS |
|---|---|---|---|
| Gross margin | 30% | 40% | 40% |
| Operating margin | 10% | 20% | 20% |

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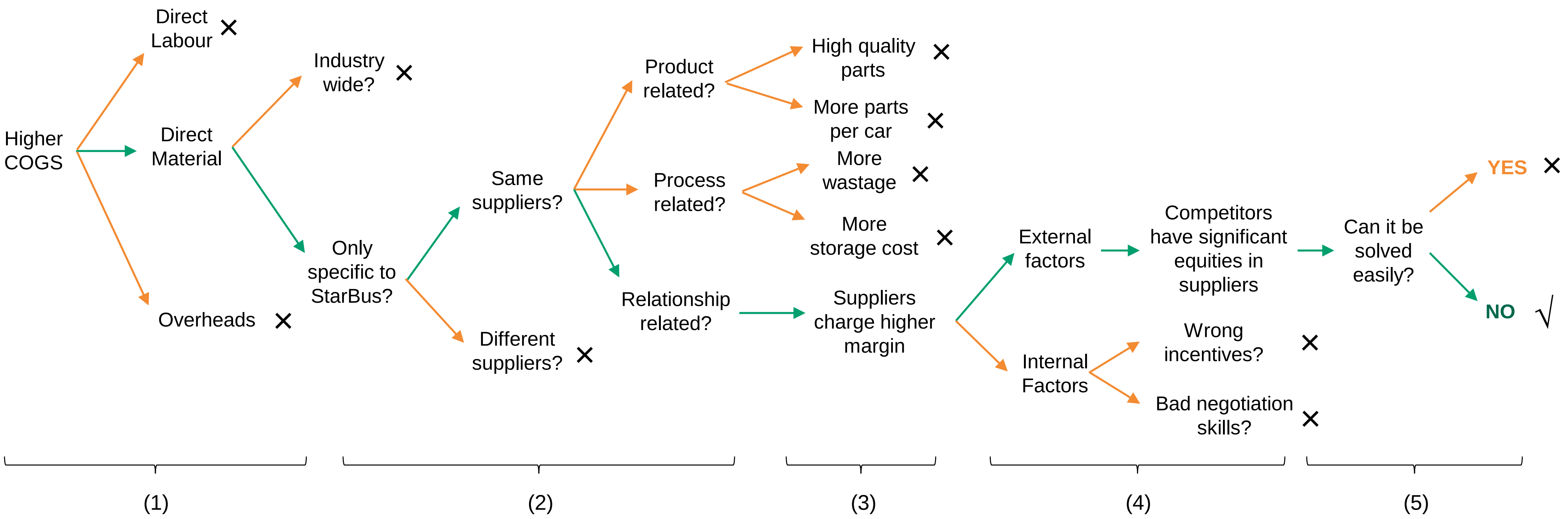
# StarBus Australia

Author: Ken Wen (‘20D)

## Part 5: Competition landscape – Cost analysis & structured thinking

This part is essentially a cost issue problem. It is deliberately designed to test the candidate’s structured thinking ability.
The candidate should drive the process step by step and he/she finds the root cause to the higher cost, and concludes that the root cause cannot be fixed easily



# StarBus Australia

Author: Ken Wen (‘20D)

## Part 5: Competition landscape – Cost analysis & structured thinking (continued)

Again, this part is designed for candidates to showcase their structured thinking. If candidates are not driving the case forward, below are questions that interviewers can ask to push candidates towards self-driving the case:

(1): What can cause higher COGS?

(2): Yes StarBus is paying higher direct material costs; how to you want to proceed? Do you want to find out why? How?

(3): What can cause StarBus to pay a higher direct material costs than its peers

(4): Why do you think the same suppliers are charging higher prices to StarBus?

(5): StarBus’ suppliers industry is highly consolidated, and switching suppliers is very costly to bus manufactuers. Do you think the problem can be solved relatively easily and within a short time frame?

## Good vs Great candidates

| A good candidate will | Additionally, a great candidate will |
|---|---|
| 1) Provide reasonably good structure in answering each of the questions<br>2) Be able to drive the case forward with few hints (2-3) and find the final root cause<br>3) Be able to defend their answers when challenged by interviewers | 4) Demonstrate strong ability in leading the conversation and driving the case without help from interviewers<br>5) Answers are structured and succinct<br>6) Proactively link the answer to the overall framework (Higher gross margin -> cannot solve the problem easily -> disadvantaged by competitors -> unattractive investment) |

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# StarBus Australia

Author: Ken Wen ('20D)

## Part 6: Solution & Recommendations

To conclude, the candidate should include the following:

Recommendation:

- Acquiring StarBus is not a good investment for the client because
    - School Bus market in AU will decline drastically over the next 3-5 years (schools have replaced all of their old buses with new buses due to the new regulation)
    - StarBus is paying higher prices for direct materials comparing with its competitors, and it is unlikely that StarBus can negotiate a lower price or switch to a new supplier within a short timeframe.

Next steps:

- Look at the evaluation model. If the price is heavily undervalued, the investment is still attractive given the above adverse factors
- Switch target to MelBus or SydBus instead
- Assess the synergies between the bus manufactures with PE client's portfolio companies

# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

| Case Information | |
|---|---|
| **Difficulty level – Quantitative** | 3 |
| **Difficulty level – Creativity** | 5 |
| **Difficulty level – Structure** | 3 |
| **Case led by** | Candidate |
| **Case type** | Profitability, Market Entry |
| **Industry** | Asset Management / Private Equity |

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# Whitesand Capital Partners

Author: Komo Yamashita (‘20D)

## Case Prompt / Description

Your client is Whitesand Capital Partners, a large asset manager based in the US with $5 Trillion in Assets Under Management (AUM) and a presence in all large financial centers around the world. Whitesand was known for having some of the best talent in managing fixed income (bond) products in the past, and are continuingly expanding their product offerings to clients by acquiring a number of other asset managers with different strengths. Despite AUM growth in both of their customer segments, Retail and Institutional, and being the largest asset manager in the world, Whitesand has recently been facing declining profitability and shareholders are demanding a shift in strategy. The CEO of Whitesand has brought you in to diagnose the problems, and to help turn the firm’s share price around.

## Information to be used to answer clarifying questions

- This is an INTERVIEWEE-led case.
- If the interviewee asks for a target/goal, tell them that the goal is to simply improve profitability without a specific number in mind.
- How does the company generate revenue? The company generates revenue by charging a fee on AUM managed. (Example: 1% on $1 Million AUM = $10,000 in Revenue)
- The two main customer segments are retail and institutional. Retail invests in simpler products like stocks and bonds. Institutional can invest in any kind of product. Retail and Institutional AUM is split 50/50, but the Institutional segment is growing faster.

# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

## Guide to interviewer

- **Topics being tested:** Profitability (Revenue Branch) & Market Entry.
- The case is centered around restoring revenue and finding ways to do so.
- This case **should always be done with Exhibit 1 shown before Exhibit 2**.
- The candidate will be tested on their ability to draw conclusions from the exhibits.
- The candidate should ask relevant questions to reveal more information about the case.
- This case is **open-answer**, any of the conclusions can be correct given the interviewee gives concrete evidence.

## Guide for use of exhibits

**Exhibit 1**

Hand out this exhibit when asked about **Revenue.**

**Key Insights:**
a) Declining Revenue in all products
b) Must find new way to generate revenue

**Exhibit 2**

Hand out this exhibit when asked about **New products / Market.**

**Key Insights:**
a) Far more lucrative product segment
b) May reverse profitability trend

# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

## Sample Factors to Consider in Candidate's Structure

**Upon recognizing that this is a profitability case,** a good candidate would also consider the following as factors that could affect the business:

**A Good Answer would include the following:**

- **Investors:** Who are the target investors? Do certain subsets of investors have different preferences? Is one subset growing faster than the other?
- **Products:** What kind of products does Whitesand offer? How do they provide services to investors?
- **Competitors:** Has the competitive landscape changed at all? Are Whitesand's products superior or inferior to peers?

**A Very Good Answer might also include:**

- **Exposure to Broader Market:** Is Whitesand overly exposed to the broader market? Is the economy in a recession, and is that causing it to have declining profitability?
- **Pricing/Costs:** Has the firm's pricing structure changed? Have fees fallen on any of their products? Has the cost structure of the firm changed? Are technology or personnel costs higher now?
- **Previous M&A Transactions:** How well have they fared? Has their acquisition strategy paid off?
- **Future Product Strategy:** Is there possibility for future M&A, what has been the trend in the industry (consolidation)? Does the firm have capability to challenge players in products they have a weaker presence in?

# Whitesand Capital Partners

Author: Komo Yamashita (‘20D)

## Revenue Branch

**Hand out Exhibit 1 first – Ask interviewee about the insights they have from the exhibit**

After reviewing Exhibit 1, interviewee should note that **Whitesand’s traditional products are gradually contributing to declining revenue**. If asked about the difference in products, Active Products are more expensive, because they have the **extra cost of people who try to outperform the market**. Passive products are simply products that **mirror the market and do not underperform or outperform**. Equities are another way to say stocks, while Fixed Income means bonds.

If asked, note that **returns between passive and active classes are about the same**. A great interviewee would recognize that money has been flowing from higher fee to lower fee products because the products are the same in terms of returns.

If asked, mention that the retail segment has stronger appetite for lower-fee products, while **the institutional segment is likelier to pay higher fees to try to get higher returns.** A great interviewee will question whether there is a way to boost returns for the institutional segment via existing or new products.

The interviewer should ask what Whitesand could do to reverse this profitability trends: i.e., **New Higher Fee / Yielding Products, or Marketing Active Products.** The interviewer should try to direct the discussion toward **higher fee / yielding products.**

## Cost Branch

- **Fixed:** Fixed costs have stayed relatively stable. Whitesand’s cost discipline has been strong on the fixed side.
- **Variable:** Interviewee should consider what variable costs for a firm like Whitesand would be. Considering Whitesand’s scale (given that they are the largest asset manager in the world), **variable costs on operations like trading or sourcing are the lowest in the industry**. Once they have recognized this, tell them that variable costs have been stable.

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# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

## Calculating Private Equity Fees – Quantitative

**Hand Exhibit 2 to the interviewee when they mention new products with higher returns / fess.**

- **Give Guidance on Calculation on Private Equity Fees:** Private Equity Uses *the 2/20 Model*. Private Equity has a fixed and variable fee structure. **2% of Capital Invested is the Management Fee, while 20% of returns past a certain "hurdle rate" is assessed as a variable fee.** In other words, any extra return that the fund gets beyond the hurdle rate, ***80% of it goes to the investor, and 20% goes to the firm.***
- Ask the candidate **which type of fund Whitesand should launch**. To start, **ask them to calculate the fees on each type of Private Equity Fund assuming an 7% hurdle rate**, and **$3 Billion on invested capital in each fund.** Use the three data points available to extrapolate a return for each type of Private Equity Fund to use for your calculation.
- **Leveraged Buyout** = *14% Return [(13+15+14)/3]. Management Fee = $3 Billion * 2% = 60 Million. Variable Fee = 3 Billion * [14%-7%] * 20% = 42 Million. Total Fees = 60+42 = 102 Million*
- **Distressed Debt** = *12.3% Return [(11+9+17)/3]. Management Fee = $3 Billion * 2% = 60 Million. Variable Fee = 3 Billion * [12.3% - 7%] * 20% = 31.8 Million. Total Fees = 60+31.8 = 91.8 Million*
- **Growth** = *12.6% Return [(13+11+14)/3]. Management Fee = $3 Billion * 2% = 60 Million. Variable Fee = 3 Billion * [12.6% – 7%] * 20% = 33.6 Million. Total Fees = 60 + 33.6= 93.6 Million*
- **Venture Capital** = *14.3% Return [(23+6+14)/3]. Management Fee = $3 Billion * 2% = 60 Million. Variable Fee = 3 Billion * (14.3% - 7%) * 20% =43.8 Million. Total Fees = 60 + 43.8 = 103.8 Million*
- After getting the above figures, **ask what other factors Whitesand should consider** when deciding which type of fund to start. **Some sample answers would include**: Volatility of Returns (No Variable Fees are possible), Fund Size, Start-up Costs (Talent or Firm Acquisition), Competition, Investor Asset Allocation Constraints

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# Whitesand Capital Partners

Author: Komo Yamashita (‘20D)

## Sample Solution & Recommendations

*Given the information presented to us, Whitesand Capital Partners should enter the Private Equity Market to restore profitability and shareholder confidence.*

- *Reason 1: Traditional Products are seeing intense fee compression across the board.*
- *Reason 2: Private Equity Fees per billion dollars of AUM is higher.*
- *Reason 3: Institutional Investors, who can invest in Private Equity, are growing at a faster pace.*

## Guide: Good vs Great Case

A Good Candidate will cover these points:

a) Price Compression for traditional products
b) Private Equity Fees are higher than traditional products
c) Costs of starting the Private Equity Business
d) Private Equity Business Growth

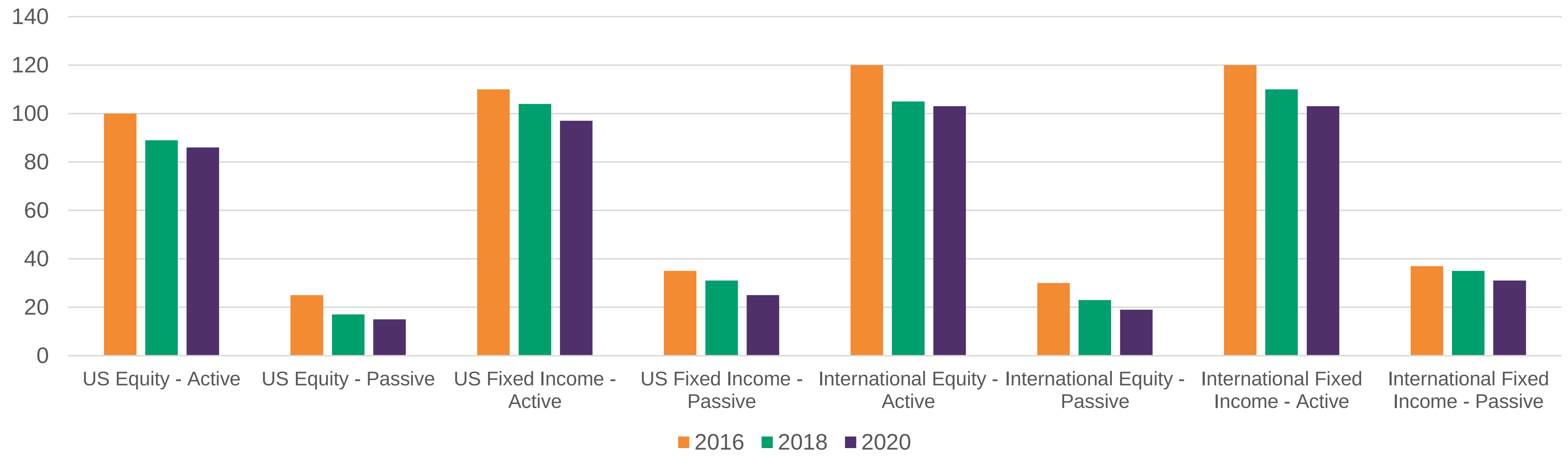
A Great Candidate will cover these points:

a) Traditional Products are likely to further allocate to Passive Products
b) Venture Capital is more volatile, and risks losing the Variable Fees
c) Raise questions about how allocated Institutional Investors are to Private Equity despite being a growing segment
d) Does Private Equity fit with Whitesand’s Brand?
e) Private Equity Market Competitiveness

# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

**Exhibit 1 – Asset Class Expense Ratio (Basis Points, 1/100th of a Percent)**




*Expense Ratio: Fee paid by client to Whitesand on each dollar of assets managed*

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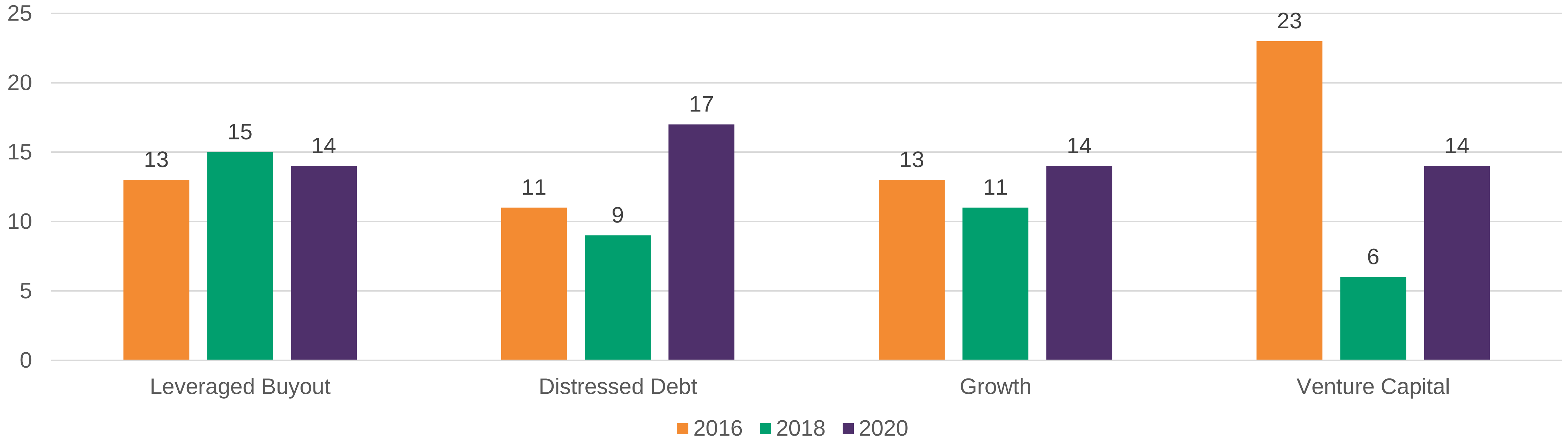
# Whitesand Capital Partners

Author: Komo Yamashita ('20D)

## Exhibit 2 – Private Equity Index Returns (Yearly, %)




*Total Fees = Management Fee * AUM + Performance Fee *  AUM * (Return – Hurdle Rate)*

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