Introduction

Cofold Construction Co (CC) is a listed construction company. Its head office is in the capital city, Lambdahasa, of the country of Omegland. Omegland has two neighbouring countries, Alphia and Betal. The countryside in both Alphia and Omegland is generally flat. In Betal, there is a large range of mountains (the Isnardi mountains) which separates its Eastern region from the rest of the country. All three countries use the same currency, the dollar ($).

The board of CC comprises 50% executive directors and 50% independent non-executive directors. The senior board members are:

Chairman – Imena Bhudia

Chief Executive – Burton Vadher

Senior Non-Executive Director - Alex Larsen

CC’s core business is to provide support services, such as upgrade of electricity networks and road renewal and maintenance, in all three countries. However, it has also undertaken road construction projects of increasing size and complexity. Initially, CC carried out most of its major construction projects in Omegland, its biggest project there being a ring road around the city of Lambdahasa. CC has also started to develop a portfolio in Alphia, the biggest development there being a road between Phi City and Tautown, which was completed in 20X0.

To date, CC has not carried out any road construction projects in Betal. However, an opportunity has arisen for CC to tender for construction of a major road in Betal, which would be the biggest project which CC has undertaken to date.

The following exhibits provide information relevant to CC:

Exhibit 1: Extracts from the most recent annual report of CC.

Exhibit 2: Press release of the announcement of the new road in Betal.

Exhibit 3: Forecast revenues and costs for the construction of the new road in Betal.

Exhibit 4: Outline contents of the project initiation document (PID) and a summary of the operational issues section of the PID.

Exhibit 5: Transcript of an emergency meeting at CC’s head office.

Exhibit 6: Report of an interview with Burton Vadher in *Omegland* *Daily* *News* newspaper.

The case requirements are as follows and you will be told which role you are taking in each task.

**Task 1**

Summarize the case study and its exhibits and develop a conceptual map.

**Task 2**

It is now October 20X2, six months after CC began construction of the new road in Betal.

*You are the consultants* *employed* *by* *CC’s* *board.*

Burton Vadher, CC’s chief executive, has asked you to help him to prepare for the next board meeting, which will discuss investment in big data analytics and offering long-term infrastructure management for roads in Omegland, Alphia and Betal.

**Required:**

**Prepare** **Five** **presentation** **slides,** **together** **with** **accompanying** **notes,** **for** **the** **chief** **executive** **to** **present** **to** **the** **board** **which:**

* **Analyse the financial and non-financial issues which will affect the final decision of whether to accept the contract to build the road in Betal.**
* **Discusses** **the** **benefits** **and** **the** **costs** **to** **CC** **of** **investing** **in** **big** **data** **analytics;**
* **Evaluates** **the** **possible** **opportunity** **to** **undertake** **long-term** **infrastructure** **management** **of** **roads** **in** **the** **three** **countries.**

Exhibit 1: Extracts from the most recent annual report of CC

Chief executive’s statement

CC’s results have shown increased profitability and stronger cash flows. The quality and value of the newer projects have been enhanced by a more focused approach to tendering. We have avoided speculative projects and concentrated on larger projects with high margins and advantageous contract terms. We believe that these are projects which can unlock new opportunities for CC. As a result I am delighted to announce the first increase in dividends for three years.

The results reflect the successful completion of the ring route linking the main roads round Lambdahasa. The $10 billion earnings from this, CC’s biggest ever construction project, have shown CC’s ability to expand the scope and size of the projects which it undertakes.

CC’s *Stakeholder* *First* programme, aiming to enhance our relationships with all our key stakeholders, has also delivered benefits. We look forward to the prospect of building on our strong relationship with the government of Omegland. We also continue to engage with communities affected by our work. We are mindful of the economic benefits which improved infrastructure will bring, but also want to address concerns about adverse impacts on the environment.

Looking forward, the development over the next two years of our *SiteSmart* initiative will improve our project management in all aspects. It will result in more effective deployment of business resources, reducing wasted time and enhancing our competitiveness by reducing project lead times. We also see the effective use of big data as an important goal. We shall be looking to upgrade our systems to take full advantage of it.

I am delighted also to report that our operations in Alphia are showing a profit for the first time in four years. The main factor depressing results in Alphia continues to be losses from the contract for the construction of the road between Phi City and Tautown. The board has reflected hard on the issues which arose on this project. We believe that the lessons we’ve learnt are positively influencing our systems and working practices, and this will be demonstrated on future projects.

*Burton* *Vadher,* *Chief* *Executive*

Extracts from Risk report section of annual report

*Board* *responsibilities*

The board formally reviews major risks as a regular part of its agenda and has ultimate responsibility for risk management. Risk management is incorporated within operational systems and in the daily activities of CC.

*Audit* *committee* *responsibilities*

CC has an audit committee (the committee), comprised entirely of independent non-executive directors, in line with international governance best practice. All committee members have accountancy or finance qualifications. The committee meets every three months. It reports to the board on the significant issues considered in relation to the financial statements and on its assessment of the external audit process. The committee reviews and approves the role and mandate of internal audit, approves the annual internal audit plan and monitors and reviews the effectiveness of its work on CC’s financial and accounting systems. The committee has a general responsibility for promoting sound risk management and internal control systems.

The committee is assisted in its work by a risk manager and a health and safety manager.

**Specific risks**

|  |  |
| --- | --- |
| Health and safety | CC is responsible for minimising the risks of hazards and dangers to employees and others arising from its operations. The health and safety manager’s principal responsibilities include maintaining health and safety documentation, organising training and accreditation for staff, reviewing health and safety reports and monitoring compliance in conjunction with internal audit.  CC is obliged to report the $300,000 fines it paid as a result of injuries to employees arising from failures to remedy dangerous conditions on site. The health and safety manager has made recommendations for enhanced site safety procedures which will be implemented on current and future contracts. |
| Tendering | CC requires a stream of successful bids and projects to deliver value for shareholders. It cannot commit to too many bids, nor accept projects which offer insufficient returns for excessive risks. The board is considering specifying a minimum profit margin of 8% for most projects. |
| Project delivery | Any failure of projects to meet time, budget and quality requirements represents a fundamental threat to CC’s business. Such failure can arise from unrealistic plans, failure to assess progress properly and lack of effective reporting. CC’s *SiteSmart* initiative will be focused on improving project delivery. |
| Environment | CC’s sustainability strategy is designed to deliver the environmental outcomes which society demands. CC has enhanced its programme for reducing carbon emissions. CC is focusing on reduction of energy and fuel consumption. CC also aims to minimise the disruption  to communities and the natural environment caused by its activities. It consults with community representatives and other interested parties to address these issues. |
| Financial | Failure to maintain liquidity and meet loan repayment and covenant requirements will jeopardise CC’s ability to win new contracts. CC aims to maintain a capital structure which balances equity and debt, and ensures liquidity and working capital requirements are met. The board is satisfied that undrawn bank facilities will be sufficient to meet continuing needs. The board is also confident that loans due for repayment in the next three years can be replaced by equivalent funding if required. |
| Business integrity and reputation | CC’s board is committed to safeguarding against the risks of fraud, bribery and corruption and ensuring a commitment to honesty that avoids false claims and misleading statements. CC’s code of conduct and rigorous ethics training are designed to maintain stakeholder trust in the company’s integrity and avoid legal penalties and reputational damage. |

Exhibit 2: Press release of the announcement of the new road in Betal dated 10 November 20X1

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| --- |
| Announcing new road between Gamvile and Lake Ita |
| A $20 billion new road scheme between Gamville and Lake Ita will transform the economy of Betal’s Eastern region, cutting the average journey time through the Isnardi mountains by almost half.  Minister for Transport, Desmond Otieno, said: ‘I am pleased at last to be able to confirm the scheme, which will help enhance the Eastern region’s economic development. This region has been held back by the poor roads through the Isnardi mountains. Flooding during the wet season has often caused traffic delays, and sometimes the road is impassable. The new road will resolve all these problems.  We have identified a preferred partner, which we have invited to submit a detailed tender for the contract to construct the road. At the moment their identity is confidential but we hope to announce shortly who it is. I can confirm that they are from outside Betal.  Low price will be an important criterion when choosing the contractor. We shall also want the contractor to carry out the work efficiently, with its timetable being as short as possible, to ensure that disruption during construction will be kept to a minimum. The government will guarantee any debt finance that the contractor needs to fund the project.  We appreciate the concerns expressed about the impact on some villages in the mountains and the damage to the habitats of a number of species of wildlife. We shall expect our chosen contractor to limit its environmental footprint while it constructs the road. It will be required to base its construction plans on mitigating the environmental impact of the road when it opens.  When completed, we are certain that the new road will give a big boost to our country’s economy and be a lasting achievement of this government.’  end |

Exhibit 3: Forecast revenues and costs for the construction of the new road in Betal

It is assumed that construction will begin in May 20X2 and be completed in December 20X5

Progress payments from Betal’s government are scheduled as follows:

$m

30 April 20X3 1st Interim (20%) 4,200

30 April 20X4 2nd Interim (25%) 5,250

28 February 20X5 3rd Interim (20%) 4,200

31 December 20X5 Final (35%) 7,350

**= 21, 000**

**Projected Costs**

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| --- | --- | --- | --- | --- | --- |
|  | 20X4 ($m) | 20X3 ($m) | 20X4 ($m) | 20X5 ($m) | Total ($m) |
| Road surfaces | 1,000 | 1,790 | 1,860 | 1,460 | 6,110 |
| Tunnels | 850 | 1,520 | 1,600 | 970 | 4,940 |
| Bridges and underpasses | 380 | 660 | 690 | 580 | 2,310 |
| Crossing and signage | 110 | 190 | 210 | 180 | 690 |
| Ground remediation and stabilization | 300 | 520 | 550 | 460 | 1,830 |
| Drainage | 230 | 400 | 410 | 330 | 1,370 |
| Lighting | 100 | 180 | 180 | 150 | 610 |
| Fencing and Safety Barriers | 120 | 210 | 220 | 200 | 750 |
| Other Costs | 60 | 120 | 120 | 90 | 390 |
| **Total** | **3,150** | **5,590** | **5,840** | **4,420** | **19,000** |

Exhibit 4: Outline contents of the project initiation document (PID) and a summary of the operational issues section of the PID

OUTLINE CONTENTS OF PID DOCUMENT

Project aims and background

– Introduction – Background

– Business case – benefits, costs, progress payments – Financial budget and funding

Operational issues

– Time and cost constraints – Risks

Personnel and responsibilities

– Project sponsor – Project manager

SUMMARY OF OPERATIONAL ISSUES SECTION

Cost and time constraints for stages of construction

$bn Stage 1 Gamville–Omicon (May 20X2–April 20X3) 4·7 Stage 2 Omicon–Nuhasa (February 20X3–April 20X4) 5·5 Stage 3 Nuhasa–Zetatown (February 20X4–February 20X5) 5·2 Stage 4 Zetatown–Lake Ita (March 20X5–December 20X5) 3·6

2 0 X 2 2 0 X 3 2 0 X 4 2 0 X 5

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**Main** **risks**

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| --- | --- |
| Risks | Risk management |
| Health and safety | – Use of health and safety manual – Staff training  – On-site procedures including handling dangerous substances, removing hazards and warning of dangerous conditions, with regular monitoring by site management  – Inspections by health and safety manager and internal audit |
| Supply chain | – Competitive tendering  – Contracts showing target requirements and penalties  – Procedures for changing terms |
| Environment | – Programme for disposal of waste – Energy conservation measures  – Carbon emission reductions |

Exhibit 5: Transcript of an emergency meeting on 20 July 20X2 at CC’s head office following protests against construction of the new road in Betal

Present: Burton

Imena Bhudia

Alan Chang

Pat Singh

Chief executive Chairman

Risk manager Consultant

*The* *meeting* *began* *at* *10am.* *Burton* *opened* *the* *meeting* *by* *playing* *the* *following* *clip* *from* *Betal’s* *news* *programme* *about* *the* *break-in,* *from* *earlier* *that* *morning:*

Presenter: Two protesters were seriously injured last night after they broke into one of the construction sites for the new road through the Isnardi mountains. The break-in is an escalation of the recent protests against the new road. Protesters have been unhappy that they have not been able to meet with Burton Vadher, CC’s chief executive. Our reporter, Iris Ivezic, is outside the site. Iris, what can you tell us about the break-in and the injuries to the protesters?

Reporter: It appears that a number of protesters created a diversion outside this entrance. Whilst the two security staff on site investigated, other protesters broke in elsewhere, close to where a break-in was attempted last week. On that occasion, the security staff spotted the protesters and prevented access. This time, however, two protesters got in. It seems that one collided with a van driven by an employee of CC. The other protester was apprehended by another CC employee, and was subsequently taken away by police.

No representative from CC has made any comment about last night’s events and we have not been able to speak with any of the employees involved. However, as he was led away the protester who was arrested shouted out about the protester injured by the van: ‘They ran him over. The van deliberately went straight for him and ran him over.’

(end of clip)

Burton:

Alan:

Imena:

Alan:

Imena:

Alan:

Burton:

Alan:

Imena:

Alan:

Imena:

Burton:

Imena:

Burton:

Imena:

I thought that showing the news report was the best way to brief you on what happened, although Alan has found out more since.

I’ve spoken to our employees and the staff from Sholin Security, the security firm in Betal, which we use. It seems that they both went to deal with the protesters at the main entrance.

Were there only two security staff on site?

Yes. The contract only states that the security post should be manned at all times.

The news report mentioned an attempted break-in last week. Were we told about it?

The security staff said that they’d reported it to their managers, but no-one from Sholin Security appears to have contacted us.

What more do we know about what happened once the protesters got in?

The protester who was injured ran across an unlit service road and the van collided with him.

Should the area have been lit better?

Apparently lighting was one of the things picked up by Li Kurata, our health and safety manager, when he visited the site two months ago. Staff said that the lighting was going to be fixed before internal audit’s visit planned for next month.

Why isn’t Li here?

Li’s been off sick for the last six weeks. We’ll have to get a temporary replacement in now to fill the gap caused by Li’s absence.

Did Li submit his report on the site before he went sick?

I did receive it but the points were generally minor. We’ve had so much else to discuss at board meetings recently that I haven’t had a chance to report on health and safety.

What more do we know about the protester who collided with the van?

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Alan:

Imena:

Alan:

Imena:

Burton:

I haven’t spoken to the van driver yet but I have spoken to the security guard who chased the protester. He didn’t see the collision, only the aftermath.

How about the protester who claimed to have seen his friend being run over?

I’m not sure whether he would have been able to see clearly what happened as the lighting was so poor. He’d also fallen over on a patch of oil, which hadn’t been mopped up. This was why the security guard was able to catch up with him.

You told me earlier, Burton, that our lawyers have advised us not to make any statement that we are responsible and that the police and health and safety authorities will be looking at the site over the next few days.

That’s all correct. Of course we shouldn’t admit to any responsibility for the injuries. I’ll be flying out to Betal this afternoon. When I get out there, I’ll issue a statement to the press saying that we regret the injuries, but protesters who trespass on building sites have only themselves to blame. We’ll ensure the site’s tidied up, lights fully on, etc. I’ll also speak to the staff there and make sure they’re all saying the same things. They’ll get a hardship bonus because of all the stress they had last night. I’m fed up with these protesters and the way they’re disrupting this contract.

*Burton* *and* *Alan* *leave* *the* *meeting.* *Imena* *and* *Pat* *continue* *a* *private* *conversation.*

Imena: I’m worried about what Burton will say and do when he’s in Betal and his attitude on the issues we’ve discussed. Can you send me a memo before Burton goes to Betal, setting out your views? You can be as frank as you like, I shall keep the memo confidential. I’m also not happy generally with how risk has been managed and controls have been operating. I’d like you to draft me a summary of control weaknesses, and how they should be remedied. I want the board to see quickly and clearly what the problems are and what we must do. Also, other companies have separate audit and risk committees, rather than a single audit committee like CC has. Please can you prepare a briefing paper for the next board meeting, setting out the advantages for CC of having separate audit and risk committees.

**Exhibit 6: Report of an interview with Burton Vadher in *Omegland* *Daily* *News* newspaper – October 20X2**

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| BIG DATA WILL HELP CC GAIN STRATEGIC ADVANTAGE |
| CC will be at the forefront of the construction sector in Omegland in using big data to gain strategic advantage, according to its Chief Executive, Burton Vadher: ‘We must make full use of all of the information available on traffic volumes and road conditions to run our operations efficiently and seize new opportunities to enhance shareholder wealth.’  Mr Vadher wishes CC to develop big data capabilities alongside its current *SiteSmart* initiative. He believes that enhanced big data capabilities will help CC gain road infrastructure management contracts which are becoming available. Previously the governments of Omegland, Alphia and Betal have managed their countries’ road networks themselves, only using companies like CC for specific maintenance and construction work. Now, however, the governments are looking to subcontract the management of some of their road network to private sector partners, who will plan maintenance as well as carrying it out. The private sector partners will also have ongoing responsibilities such as operating traffic control and signage systems. Their income will be in the form of fees paid by government or toll charges on road users, or a combination of both.  Mr Vadher is sure that CC will be able to provide what each government wants: ‘CC will provide an integrated package of construction and support services that none of our competitors can match. We shall be the partner of choice for all three governments.’ |